Prüfbericht-Nr.: *Test Report No.:*	**50050093 004**	**Auftrags-Nr.:** *Order No.:*	164066301	**Seite 1 von 23** *Page 1 of 23*
Kunden-Referenz-Nr.: *Client Reference No.:*	N/A	**Auftragsdatum:** *Order date.:*	20.06.2016	
Auftraggeber: *Client:*	GIEC TECHNOLOGY (HONG KONG) CO., LTD. Unit 7, 22/F., Billion Trade Centre, 31 Hung To Road, Kwun Tong, Hongkong			
Prüfgegenstand: *Test item:*	8" windows tablet			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	NS-P08W7100, NS-P08W7100-C, NS-P08xxxxxxxxx (x=0-9, A-Z, a-z, - or blank, for market purpose only)			
Auftrags-Inhalt: *Order content:*	FCC approval			
Prüfgrundlage: *Test specification:*	CFR Title 47 Part 2 Subpart J Section 2.1093 ANSI/IEEE C95.1-1992	KDB 865664 D01 v01r04 KDB 447498 D01 v06 KDB 248227 D01 v02r02 KDB 616217 D04 v01r02		

Wareneingangsdatum: *Date of receipt:*	28.06.2016	Refer to photo documents
Prüfmuster-Nr.: *Test sample No.:*	A000377372-004	
Prüfzeitraum: *Testing period:*	04.07.2016	
Ort der Prüfung: *Place of testing:*	Shenzhen EMTEK Co., Ltd.	
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüfergebnis*: *Test result*:*	Pass	

geprüft von / *tested by:*			**kontrolliert von** / *reviewed by:*		
27.07.2016	Andy Yan / Project Manager		27.07.2016	Owen Tian / Technical Certifier	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges / *Other:*

FCC ID: 2AIB2-P08W7100

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery:*	Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged:*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	1 = very good	2 = good	3 = satisfactory	4 = sufficient	5 = poor
	P(ass) = passed a.m. test specifications(s)		F(ail) = failed a.m. test specifications(s)	N/A = not applicable	N/T = not tested

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STATEMENT OF COMPLIANCE

TEST ITEM	SPECIFICATION	RESULT
Specific Absorption Rate – Wi-Fi 802.11 b/g/n - 2.4GHz Band	*Refer to Specification as below*	PASS

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

☒**KDB 865664 D01** SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz

☒**KDB 447498 D01** General RF Exposure Guidance v06: RF Exposure Procedures and Equipment Authorization Policies For Mobile and Portable Table Device

☒**KDB 248227 D01** 802.11 Wi-Fi SAR v02r02: SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters

☒**KDB 616217 D04** SAR for laptop and tablets v01r02

This device complies with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/kg) specified in CFR Title 47 Part 2 Subpart J Section 2.1093 and ANSI/IEEE C95.1-1992.

The maximum results of Specific Absorption Rate (SAR) durning testing as below.

FREQUENCY BAND	EXPOSURE POSITION	EQUIPMENT CLASS	HIGHEST REPORTED SAR VALUE (W/KG)
802.11 b/g/n - 2.4GHz Band	Body	DTS	0.654

Contents

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: System Performance Check and Test Plots of SAR Measurement

Appendix B: Calibration Certificate

2 Test Sites

2.1 Test Facilities

EMTEK (Shenzhen) Co., Ltd.
Bldg. 69, Majialong Industry Zone, Nanshan District, Shenzhen Guangdong, China

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

EMTEK (Shenzhen) Co., Ltd.

Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
SAR Test System	SPEAG	DASY52 SAR TX60XL	F13/5R4XA1/A/01	15.05.2017
Power Meter	BOONTON	4232A	10539	28.05.2017
Power Sensor	BOONTON	51011EMC	34236/34238	28.05.2017
Signal Generator	Agilent	N5181A	MY50145187	28.05.2017
Validation Kit 2450MHz	SPEAG	D2450V2	927	13.01.2017
10dB Attenuator	Mini-Circuits	15542	31344	28.05.2017
10dB Attenuator	Mini-Circuits	15542	31415	28.05.2017
30dB Attenuator	30dB Attenuator	Mini-Circuits	15542	28.05.2017
Dual Directional Coupler	Agilent	EE393	TW5451008	28.05.2017
DAE	SPEAG	DAE4	1341	25.08.2016
E-Field Probe	SPEAG	EX3DV4	3970	10.07.2016
Network Analyzer	Agilent	E5071C	MY46316645	28.05.2017
Signal Analyzer	Agilent	N9010A	My53470879	28.05.2017
Power Amplifier	MILMEGA	80RF1000-175	1059345	28.05.2017
Power Amplifier	MILMEGA	AS0102-55	1018770	28.05.2017
Power Amplifier	MILMEGA	AS1860-50	1059346	28.05.2017
Power Meter	Agilent	N1918A	MY54180006	28.05.2017
ELI V5.0	SPEAG	QD 0VA 022 AA	1231	N/A
Device Holder	SPEAG	N/A	N/A	N/A

3 General Product Information

3.1 Product Function and Intended Use

The EUTs are tablet with Wi-Fi and Bluetooth function. Voice mode is supported on a tablet and it is limited to speaker mode or headset operations only.

Refer to User Manual and Circuit Diagram for further details.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

Technical Specification	Value
Product Name	8'' windows tablet
Model Number	NS-P08W7100
FCC ID	2AIB2-P08W7100
Operating Voltage	DC 3.7V 4000mAh via internal rechargeable Li-Poly battery
Adapter	Model: HK15-HASF0502000 Input: AC100-240V~, 50/60Hz, 0.35A Output: DC5.0V, 2.0A
Hardware Version	EM8300-858A
Software Version	1511

Table 3: Technical Specification of Bluetooth

Technical Specification	Value	
Operating Frequency	2402-2480 MHz	
Extreme Temperature Range	0°C ~ +40°C	
Operation Voltage	DC 3.7V via Internal rechargeable lithium battery	
Modulation	BDR mode	GFSK
	EDR mode	π/4DQPSK, 8DPSK
	Low Energy mode	GFSK
Number of Channel	BDR & EDR mode:79 channels;	Low Energy mode:40 channels
Channel Spacing	BDR & EDR mode: 1MHz;	Low Energy mode: 2MHz;
Bluetooth Version	Bluetooth 4.0 (dual mode)	
Antenna Type and Gain	1.75dBi	

Table 4: Technical Specification of Wi-Fi

Technical Specification	Value
Operating Frequency	802.11b/g/n(HT20): 2412 MHz to 2462 MHz
Extreme Temperature Range	0°C ~ +40°C
Operation Voltage	DC 3.7V via Internal rechargeable lithium battery
Modulation	802.11b: DSSS(DQPSK/ DBPSK/ CCK) 802.11g: OFDM(BPSK/QPSK/16QAM/64QAM) 802.11n: OFDM(BPSK/QPSK/16QAM/64QAM)
Data Rate	802.11b :1/2/5.5/11 Mbps 802.11g :6/9/12/18/24/36/48/54 Mbps 802.11n(HT20): MCS0 ~ MCS7 Mbps 802.11n(HT40): MCS0 ~ MCS7 Mbps
Number of Channel	802.11b/g/n(HT20): 11 Channels 802.11n(HT40): 9 Channels
Channel Spacing	5 MHz
Antenna Type and Gain	1.75dBi

Table 5: RF Channel and Frequency of Bluetooth

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	20	2422.00	40	2442.00	60	2462.00
01	2403.00	21	2423.00	41	2443.00	61	2463.00
02	2404.00	22	2424.00	42	2444.00	62	2464.00
03	2405.00	23	2425.00	43	2445.00	63	2465.00
04	2406.00	24	2426.00	44	2446.00	64	2466.00
05	2407.00	25	2427.00	45	2447.00	65	2467.00
06	2408.00	26	2428.00	46	2448.00	66	2468.00
07	2409.00	27	2429.00	47	2449.00	67	2469.00
08	2410.00	28	2430.00	48	2450.00	68	2470.00
09	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00	/	/

Table 6: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	10	2422.00	20	2442.00	30	2462.00
01	2404.00	11	2424.00	21	2444.00	31	2464.00
02	2406.00	12	2426.00	22	2446.00	32	2466.00
03	2408.00	13	2428.00	23	2448.00	33	2468.00
04	2410.00	14	2430.00	24	2450.00	34	2470.00
05	2412.00	15	2432.00	25	2452.00	35	2472.00
06	2414.00	16	2434.00	26	2454.00	36	2474.00
07	2416.00	17	2436.00	27	2456.00	37	2476.00
08	2418.00	18	2438.00	28	2458.00	38	2478.00
09	2420.00	19	2440.00	29	2460.00	39	2480.00

Table 7: RF Channel and Frequency of Wi-Fi

802.11b/g/n(HT20)			
RF Channel	**Frequency (MHz)**	**RF Channel**	**Frequency (MHz)**
01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	11	2462
06	2437	/	/
802.11n(HT40)			
RF Channel	**Frequency (MHz)**	**RF Channel**	**Frequency (MHz)**
01	--	07	2442
02	--	08	2447
03	2422	09	2452
04	2427	10	--
05	2432	11	--
06	2437	/	/

3.3 Independent Operation Modes

The basic operation modes are:

A. On, Bluetooth transmitting mode
   1. Bluetooth BDR & EDR
      a. Channel 00
      b. Channel 39
      c. Channel 78
   2. Bluetooth Low Energy
      a. Channel 00
      b. Channel 19
      c. Channel 39

B. On, Wi-Fi transmitting mode
   1. 802.11b/g/n(HT20)
      a. Channel 01
      b. Channel 06
      c. Channel 11
   2. 802.11n(HT40)
      a. Channel 03
      b. Channel 06
      c. Channel 09

C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- Bill of Material
- Block Diagram
- Circuit Diagram
- FCC Label and Location
- Operation Description
- Photo Document
- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The EUT is commanded to operate at maximum transmitting power.

The EUT shall use its internal transmitter. The antenna, battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output.

Table 8: Configuration of EUT

Operation mode	Frequency Range (MHz)	Modulation	Default Test Channel			Power Control Level
			Low	Mid	High	
Bluetooth (BDR & EDR)	2402-2480	FHSS	CH00	CH39	CH78	Test software was used to configure the EUT to transmit at maximum output power
Bluetooth (Low Energy)	2402-2480	GFSK	CH00	CH19	CH39	
802.11b/g/n(HT20)	2412-2462	DSSS, OFDM	CH01	CH06	CH11	
802.11n(HT40)	2422-2452	OFDM	CH03	CH06	CH09	

5 Tissue Simulating Liquid Ingredients

The liquid is consisted of Water, Salt, Glycol, Sugar, Preventol and Cellulose. The liquid has previously been proven to be suited for worst-case. The following table shows the detail solution.

Table 9: Composition of Tissue Simulating Liquid

Ingredients (% by weight)	Frequency (MHz)									
	450		835		915		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.88	1.78

Salt: 99+% Pure Sodium Chloride Sugar: 98+% Pure Sucrose
Water: De-ionized, 16 MΩ+ resistivity HEC: Hydroxyethyl Cellulose
DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]
Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1, 3, 3-tetramethylbutyl)phenyl]ether

5.1 Specific Absorption Rate (SAR) System Check

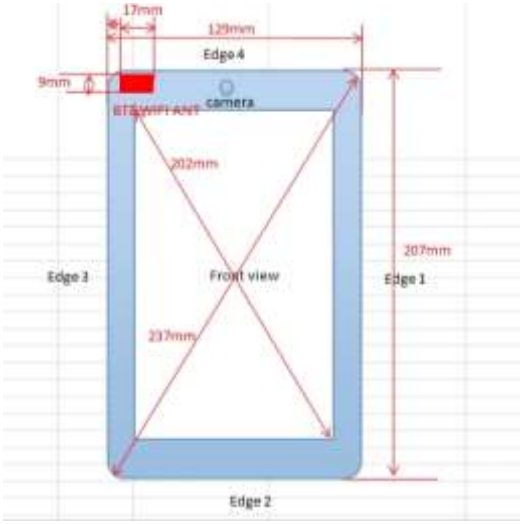
Dielectric parameters of the tissue simulating liquid were verified prior to the SAR evaluation using the dielectric proble kit and the network analyzer.

A system check measurement was made following the determination of the dielectric parameters of the tissue simulating liquid, using the dipole validation kit. A power level of 250 mW for 2.4GHz band was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in the following table.

Table 10: System Check Results of for Body of Tissue Simulating Liquid

Frequency (MHz)	Description	SAR(W/kg)		Dielectric Parameters		Temp ℃
		1g	10g	ε_r	σ(s/m)	
2450	Recommended value ±10% window	12.6 11.34 – 13.86	5.83 5.25 - 6.41	52.7	1.95	---
	Measurement value (2016-07-04)	12.5	5.72	53.1	2.02	22.5

5.2 Exposure Positions Consideration



Distance of the Antenna to the EUT surface/edge						
	Edge 1	**Edge 2**	**Edge 3**	**Edge 4**	**Bottom Face**	**Front Face**
Distance	>50mm	>50mm	≤5mm	≤5mm	≤5mm	N/A

Positions for SAR test						
	Edge 1	**Edge 2**	**Edge 3**	**Edge 4**	**Bottom Face**	**Front Face**
Exemption Limit (mW)	>95.6	>95.6	9.6	9.6	9.6	N/A
802.11b	N/A	N/A	Yes	Yes	Yes	N/A

Note: SAR testing exemption according to KDB 447498 D01 Clause 4.3.1 and KDB 616217 D04 as below.

1) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g SAR test exclusion thresholds are determined by the following:
[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR,
*where f(GHz) is the RF channel transmit frequency in GHz
*When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2) For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g SAR test exclusion thresholds are determined by the following
{[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm) ·10]} mW, for > 1500 MHz and ≤ 6 GHz

3)) Exposures to hands for typical consumer transmitters used in tablets are not expected to exceed the extremity SAR limit; therefore, SAR evaluation for the front surface of tablet display screens are generally not necessary, except for tablets that are designed to require continuous operations with the hand(s) next to the antenna(s).

5.3 Phantom Description

The used SAM Phantom meets the requirements specified in FCC KDB 865664 for Specific Absorption Rate (SAR) measurements.

The SAM Twin Phantom ELI is constructed of a fiberglass shell integrated in a table. The shape of the shell is based on data from an anatomical study designed to Represent the 90th percentile of the population. The phantom enables the dissymmetric evaluation of SAR for both left and right handed handset usage, as well as body-worn usage using the flat phantom region. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot.

Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell thickness	2.0 ± 0.2 mm (bottom plate)
Dimensions	Major axis: 650 mm, Minor axis: 400 mm
Filling volume	approx. 30 liters
Wooden support	SPEAG standard phantom table

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters.

On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

5.4 Scanning Procedure

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. All test positions (body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

The “area scan” measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strenth is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The standard scan uses large grid spacing for faster measurement. Standard grid spacing for head measurements is 15 mm in x- and y- dimension. If a finer resolution is needed, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in orientation.

A “7x7x7 zoom scan” measures the field in a volume around the 2D peak SAR value acquired in the previous “coarse” scan. This is a fine 7x7 grid where the robot additionally moves the probe in 7 steps along the z-axis away from the bottom of the Phantom. Grid spacing for the cube measurement is 5 mm in x and y-direction and 5 mm in z-direction. DASY5 is also able to perform repeated zoom scans if more than 1 peak is found during area scan.

Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01

Frequency	Maximum Area Scan Resolution (mm) (Δxarea, Δyarea)	Maximum Zoom Scan Resolution (mm) (Δxzoom, Δyzoom)	Maximum Zoom Scan Spatial Resolution (mm) Δzzoom(n)	Minimum Zoom Scan Volume (mm) (x,y,z)
≤2 GHz	≤15	≤8	≤5	≥ 30
2-3 GHz	≤12	≤5	≤5	≥30
3-4 GHz	≤12	≤5	≤4	≥28
4-5 GHz	≤10	≤4	≤3	≥25
5-6 GHz	≤10	≤4	≤2	≥22

5.5 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine. The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- Extraction of the measured data (grid and values) from the Zoom Scan
- Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- Generation of a high-resolution mesh within the measured volume
- Interpolation of all measured values form the measurement grid to the high-resolution grid
- Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to Surface
- Calculation of the averaged SAR within masses of 1g and 10g

Extrapolation

The extrapolation is based on a least square algorithm. Through the points in the first 3 cm along the z-axis, polynomials of order four are calculated. These polynomials are then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from each other.

Interpolation

The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the "Not a knot"-condition (x, y and z -direction).

5.6 Test Operation and Test Software

Test operation refers to test setup in chapter 5.

A communication link is set up with the test mode software for WiFi mode test. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode.

802.11 b/g/n operating modes are tested independently according to the service requirements in each frquency band.802.11b/g/n modes are tested on channel 1, 6, 11. However, if output power reduction is necessary for channels 1 and/or 11 to meet restricted band requirements the highest output channel closest to each of these channels must be tested instead.

SAR is not required for 802.11g/n when
a) KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
b) The highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

Each channel should be tested at the lowest data rate, and repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.

When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

5.7 Special Accessories and Auxiliary Equipment

None.

6 Test Results

6.1 Huaman Exposure to Radiofrequency Electromagnetic Fields

RESULT: **Pass**

Test Specification

Test standard	:	CFR Title 47 Part 2 Subpart J Section 2.1093
		ANSI/IEEE C95.1-1992
FCC KDB Publication	:	KDB 447498 D01 v06
		KDB 248227 D01 v02r02
		KDB 616217 D04 v01r02
		865664 D01 v01r04
		865664 D02 v01r02
Limits	:	1.6W/kg

Test Setup

Date of testing	:	04.07.2016
Operation mode	:	A, B
Ambient temperature	:	22.5℃
Relative humidity	:	56%
Atmospheric pressure	:	101kPa

Table 11: Conducted Power of Bluetooth (BDR & EDR)

Bluetooth	Conducted Power (dBm)		
	CH00 / 2402	CH39 / 2441	CH78 / 2480
Basic Date Rate	-1.21	-1.42	-1.33
Enhanced Data Rate	-1.22	-1.41	-1.32
Rated Average Power	-1.0		

Table 12: Conducted Power of Bluetooth (Low Energy)

Bluetooth	Conducted Power (dBm)		
	CH00 / 2402	CH13 / 2440	CH39 / 2480
Low Energy	-3.01	-2.96	-2.83
Rated Average Power	-2.5		

Table 13: Conducted Power of 802.11b/g/n (HT20)

802.11b/g/n (HT20)	Conducted Power (dBm)					
	CH1 / 2412		CH6 / 2437		CH11 / 2462	
	Rated Average Power	Measured Average Power	Rated Average Power	Measured Average Power	Rated Average Power	Measured Average Power
802.11b (1Mbps)	12.00	11.39	12.00	**11.75**	12.00	11.46
802.11b (5.5Mbps)		11.15		11.62		11.35
802.11b (11Mbps)		11.11		11.53		11.26
802.11g (6Mbps)	11.00	10.78	11.00	10.89	11.0	10.83
802.11g (24Mbps)		10.48		10.53		10.45
802.11g (54Mbps)		10.32		10.51		10.43
802.11n (HT20)(MSC0)	11.00	10.52	11.00	10.65	11.00	10.38
802.11n (HT20)(MSC4)		10.36		10.44		10.25
802.11n (HT20)(MSC7)		10.21		10.38		10.13
802.11n (HT40)	**Conducted Power (dBm)**					
	CH1 / 2412		**CH6 / 2437**		**CH11 / 2462**	
	Rated Average Power	**Measured Average Power**	**Rated Average Power**	**Measured Average Power**	**Rated Average Power**	**Measured Average Power**
802.11n (HT40)(MSC0)	11.00	10.40	11.00	10.51	11.00	10.23
802.11n (HT40)(MSC4)		10.28		10.25		10.03
802.11n (HT40)(MSC7)		10.37		10.25		10.08

Note:

According to KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min.test separation distance, mm)]×[√f(GHz)] ≤ 3.0 for 1-g SAR.

The maximum output power of Bluetooth is -1.0dBm (0.8mW), and the minimum separation distance is 5mm, hence the exclusion thresholds is 0.3 < 3.0, therefore the SAR testing is not required for Bluetooth function.

Table 14: Test Result of SAR Values

WiFi-802.11b original SAR Value

Mode	Test Position	Gap (mm)	Channel/ Frequency (MHz)	Max. Allowed Power (dBm)	Conducted Power (dBm)	Drift ±0.21dB	Limit SAR1g : 1.6W/kg			
						Drift(dB)	Measured SAR1g (W/kg)	Scaling Factor	Reported SAR1g (W/kg)	Figure No.
DSSS	Bottom Face	0	CH06/2437	12.00	11.75	-0.03	0.617	1.059	**0.654**	1
	Edge 3		CH06/2437		11.75	-0.09	0.111	1.059	0.118	2
	Edge 4		CH06/2437		11.75	0.01	0.186	1.059	0.197	3

Note:
1. The value with blue color is the maximum SAR Value.
2. Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.
3. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
4. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

802.11g/n SAR Test Exclusion Requirements

Mode	Channel/ Frequency (MHz)	802.11b Max. Allowed Power (dBm)	802.11g/n Max. Allowed Power (dBm)	Limit SAR1g : 1.6W/kg			
				Reported SAR1g (W/kg)	Scaling Factor	Adjusted SAR1g (W/kg)	Figure No.
OFDM	CH06/2437	12.00	11.00	0.654	0.794	0.519	N/A

Note: SAR is not required for the 2.4 GHz OFDM conditions if When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

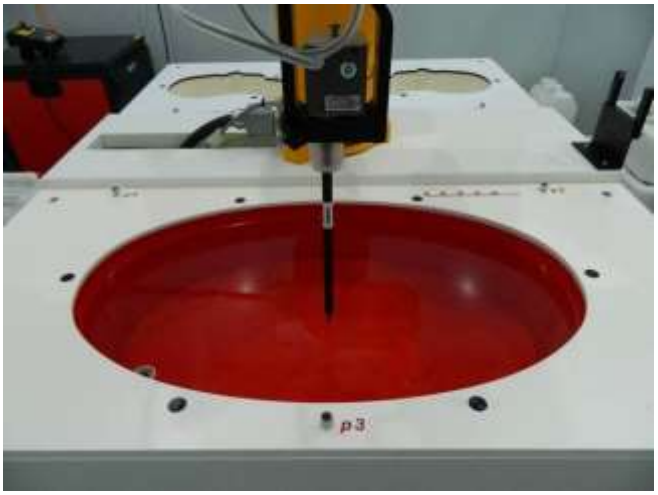
Refer to attached Appendix A for details of test results.

6.2 Measurement Uncertainty

6.2.1 Measurement Uncertainty Evaluation

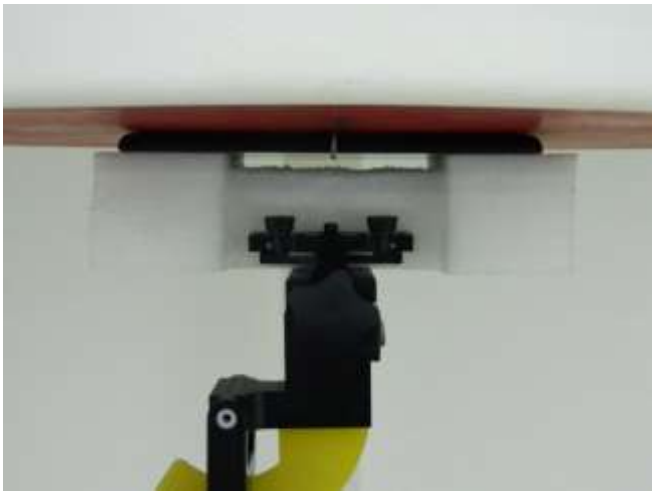
The measured SAR were <1.5 W/kg for all frequency bands, therefore per KDB Publication 865664 D01v01r04, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports.

7 Photographs of the Test Set-Up



Photograph 1: Specific Absorption Rate Test Layout

Photograph 2: Liquid Depth in the flat phantom (2450MHz, 15.5cm)



Photograph 3: Bottom Face

Photograph 4: Edge 3

Photograph 5: Edge 4

N/A

8 Lists of Tables

9 List of Photographs