SAR TEST REPORT

Test Report No.: 11253019S-A

Applicant : **KONICA MINOLTA, INC.**

Type of Equipment : **SKR 3000**

Model No. : **P-61**

FCC ID : **YR7SKR3000P6**

Test Standard : **FCC 47CFR §2.1093**

Test Result : **Complied**

Highest Reported SAR(1g) Value		SAR type	Antenna No.	Remarks			Output power (average)	
Tune-up value	(Measured)			Band	Frequency	Mode	Measured	Maximum
0.28 W/kg	0.231 W/kg	Body -worn	Main (chain 0))	DTS	2412 MHz	11b (1Mbps, DSSS)	14.19 dBm	15 dBm
1.32 W/kg	0.891 W/kg		Main (chain 0))	UNII	5700 MHz	11n(20HT) (MCS0, OFDM)	11.39 dBm	13 dBm
0.29 W/kg	0.240 W/kg	Next-of -head	Main (chain 0))	DTS	2412 MHz	11b (1Mbps, DSSS)	14.19 dBm	15 dBm
1.31 W/kg	0.885 W/kg		Main (chain 0))	UNII	5700 MHz	11n(20HT) (MCS0, OFDM)	11.39 dBm	13 dBm

*. **Highest reported SAR of this device for body-worn and next-of-head are "1.32 W/kg" and "1.31 W/kg".**
*. **Co-location was not considered, because the SLLSR (SAR to peak location separation ratio) was smaller than 0.04.**

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Date of test: July 25~29, and August 1~4, 2016

Test engineer: H. Naka
Hiroshi Naka
Engineer, Consumer Technology Division

Approved by: T. Imamura
Toyokazu Imamura
Leader, Consumer Technology Division

☐ The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan.
☒ There is no testing item of "Non-accreditation".

JAB Testing RTL02610

REVISION HISTORY

Revision	Test report No.	Date	Page revised	Contents
Original	11253019S-A	August 22, 2016	-	-

*. By issue of new revision report, the report of an old revision becomes invalid.

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Contents of appendixes

SECTION 1: Customer information

Company Name	KONICA MINOLTA, Inc.
Address	1, Sakura-machi, Hino-shi, Tokyo, Japan 191-8511
Telephone Number	+81-42-589-8429
Facsimile Number	+81-42-589-8053
Contact Person	Masayoshi Inoue

SECTION 2: Equipment under test (EUT)

2.1 Identification of EUT

Type of Equipment	SKR3000
Model Number	P-61
Serial Number	A8CE-S002
Condition of EUT	Engineering prototype (Not for sale; This sample is equivalent to mass-production items)
FCC ID	YR7SKR3000P6
Receipt Date of Sample	June 17, 2016 (*. EUT for the power measurement) *. No modification by the Lab. July 23, 2016 (*. EUT for the SAR test.) *. No modification by the Lab.
Country of Mass-production	Japan
Category Identified	Portable device (*. Since EUT may contact and/or very close to a human body and head during Wi-Fi operation, the partial-body SAR (1g) shall be observed.)
Rating	DC 15 V
SAR Accessory	Any body-worn and head mount accessories were not applied.
Feature of EUT, SAR tested consideration	Model: P-61 (referred to as the EUT in this report) is a wireless digital radiography system used in the hospitality environment.

2.2 Product Description (Wireless LAN module, antenna)

Radio type	Transceiver
Model	SX-SDMAN2

Frequency band	**2.4GHz band**		**5GHz band**				
			-	**U-NII-1 (W52)**	**U-NII-2A (W53)**	**U-NII-2C (W56)**	**U-NII-3 (W58)**
Frequency of operation (MHz) (*.ch.: channel)	11b,g, n(20HT)	2412-2462 (ch.1-11)	11a, n(20HT)	5180-5240 (ch.36-48)	5260-5320 (ch.52-64)	5500-5700 (ch.100-140)	5745-5825 (ch.149-165)
			n(40HT)	5190-5230 (ch.38-46)	5270-5310 (ch.54-62)	5510-5670 (ch.102-134)	5755, 5795 (ch.151,159)
Channel spacing (MHz)	5 (11b,g,n(20HT))		20 (11b,g,n(20HT)) / 40 (11n(40HT))				
Bandwidth (MHz)	20 (11b,g,n(20HT))		20 (11b,g,n(20HT)) / 40 (11n(40HT))				
Type of modulation	DSSS: DBPSK, DQPSK, CCK (11b), OFDM: BPSK, QPSK, 16QAM, 64QAM (11g,a,n(20HT),n(40HT))						
Transmit power (typical, maximum channel and data rate) and tolerance (as manufacture variation) (dBm) (*.ch.: channel)	11b	12.5 ±2.5 (ch.1-11 ,1-11Mbps)	11a:	10.5 ±2.5 (ch.36-48, 6-36Mbps)	10.5 ±2.5 (ch.52-64, 6-36Mbps)	10.5 ±2.5 (ch.100-140, 6-24Mbps)	10.0 ±2.5 (ch.149-165, 6-24Mbps)
	11g	12.5 ±2.5 (ch.4-8, 6-36Mbps)	n(20HT)	10.5 ±2.5 (ch.36-48, MCS0-4/8-12)	10.5 ±2.5 (ch.52-64, MCS0-4/8-12)	10.5 ±2.5 (ch.100-140, MCS0-3/8-11)	10.0 ±2.5 (ch.149-165, MCS0-3/8-11)
	n(20HT)	12.5 ±2.5 (ch.4-8, MCS0-4/8-12)	n(40HT)	10.5 ±2.5 (ch.46, MCS0-4/8-12)	10.5 ±2.5 (ch.54, MCS0-4/8-12)	10.5 ±2.5 (ch.110-134, MCS0-3/8-11)	10.0 ±2.5 (ch.151,159, MCS0-3/8-11)
	*. The value in a table shows the maximum average power on each single antenna. 3dBm is added for MIMO power. *. Refer to clause 2.3 for more detail. Refer to clause 2.4 for the maximum output power which may possible. *. The measured Tx output power (conducted) refers to Section 6 in this report.						
Power supply	DC 3.3V, DC 1.8V *.The dc power of SX-SDMAN2 is supplied from the constant voltage circuit of the main body of the EUT.						

Antenna	**Main antenna (chain 0)**	**Sub antenna (chain 1)**
Antenna quantity	2 pcs. (*. Separation distance between the main antenna and the sub antenna: approx.500 mm) 11b,g,a: One selected Tx antenna operation. 11n(20HT),n(40HT): One selected Tx antenna operation (MCS0~7) / Two Tx antenna operation (MCS8~13)	
Antenna model	AEP8P-100000 (cable length: 174.0±5.0 mm, O.D.1.37 mm)	AEP8P-100001 (cable length: 428.0±5.0 mm, O.D.1.37 mm)
Antenna type / connector type	PIFA (Planar Inverted F Antenna) / Connector; PCB side: U.FL, Antenna side: soldered	

Antenna gain (max.peak) (*.installed into the platform) (*.including cable loss)

Frequency(MHz)	2400	2442	2484	2500	5150	5350	5470	5725	5875
Directivity(dBi)	6.18	5.91	6.69	4.31	5.37	6.44	5.31	4.02	6.68
Efficiency(%)	11.28	15.39	13.68	16.43	16.20	18.07	16.81	20.66	14.24
Peak Gain(dBi)	-3.28	-2.22	-1.95	-3.53	-2.58	-0.98	-2.42	-2.81	-1.78

Frequency(MHz)	2400	2442	2484	2500	5150	5350	5470	5725	5875
Directivity(dBi)	6.7	6.59	6.65	6.34	6.39	6.07	6.45	5.08	6.56
Efficiency(%)	11.85	12.26	13.01	12.29	16.09	15.58	13.36	16.32	13.13
Peak Gain(dBi)	-2.56	-2.53	-2.21	-2.76	-1.54	-200	-2.28	-2.78	-2.25

*. The EUT do not use the special transmitting technique such as "beam-forming" and "time-space code diversity."

2.3 Tx output power (typical) specification (antenna port terminal conducted)

(*. The value in a table shows the power on each single antenna. 3dBm is added for MIMO power.)

		Target Power [dBm] (average)																											
		11b				11g								11n(20HT)															
[MHz]	CH	1	2	5.5	11	6	9	12	18	24	36	48	54	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
2412	1	12.5	12.5	12.5	12.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
2417	2	12.5	12.5	12.5	12.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
2422	3	12.5	12.5	12.5	12.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
2427	4	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	11	11	12.5	12.5	12.5	12.5	12.5	11	11	9.5	12.5	12.5	12.5	12.5	12.5	11	11	9.5
2432	5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	11	11	12.5	12.5	12.5	12.5	12.5	11	11	9.5	12.5	12.5	12.5	12.5	12.5	11	11	9.5
2437	6	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	11	11	12.5	12.5	12.5	12.5	12.5	11	11	9.5	12.5	12.5	12.5	12.5	12.5	11	11	9.5
2442	7	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	11	11	12.5	12.5	12.5	12.5	12.5	11	11	9.5	12.5	12.5	12.5	12.5	12.5	11	11	9.5
2447	8	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	11	11	12.5	12.5	12.5	12.5	12.5	11	11	9.5	12.5	12.5	12.5	12.5	12.5	11	11	9.5
2452	9	12.5	12.5	12.5	12.5	9	9	9	9	9	9	9	9	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
2457	10	12.5	12.5	12.5	12.5	9	9	9	9	9	9	9	9	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
2462	11	12.5	12.5	12.5	12.5	9	9	9	9	9	9	9	9	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

		Target Power [dBm] (average)																											
		11a								11n(20HT)																			
[MHz]	CH	6	9	12	18	24	36	48	54	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
5180	36	10.5	10.5	10.5	10.5	10.5	10.5	9	7.5	10.5	10.5	10.5	10.5	10.5	9	7	6	10.5	10.5	10.5	10.5	10.5	9	7	6
5200	40	10.5	10.5	10.5	10.5	10.5	10.5	9	7.5	10.5	10.5	10.5	10.5	10.5	9	7	6	10.5	10.5	10.5	10.5	10.5	9	7	6
5220	44	10.5	10.5	10.5	10.5	10.5	10.5	9	7.5	10.5	10.5	10.5	10.5	10.5	9	7	6	10.5	10.5	10.5	10.5	10.5	9	7	6
5240	48	10.5	10.5	10.5	10.5	10.5	10.5	9	7.5	10.5	10.5	10.5	10.5	10.5	9	7	6	10.5	10.5	10.5	10.5	10.5	9	7	6
5260	52	10.5	10.5	10.5	10.5	10.5	10.5	9	7.5	10.5	10.5	10.5	10.5	10.5	9	7	6	10.5	10.5	10.5	10.5	10.5	9	7	6
5280	56	10.5	10.5	10.5	10.5	10.5	10.5	9	7.5	10.5	10.5	10.5	10.5	10.5	9	7	6	10.5	10.5	10.5	10.5	10.5	9	7	6
5300	60	10.5	10.5	10.5	10.5	10.5	10.5	9	7.5	10.5	10.5	10.5	10.5	10.5	9	7	6	10.5	10.5	10.5	10.5	10.5	9	7	6
5320	64	10.5	10.5	10.5	10.5	10.5	10.5	9	7.5	10.5	10.5	10.5	10.5	10.5	9	7	6	10.5	10.5	10.5	10.5	10.5	9	7	6
5500	100	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5520	104	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5540	108	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5560	112	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5580	116	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5600	120	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5620	124	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5640	128	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5660	132	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5680	136	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5700	140	10.5	10.5	10.5	10.5	10.5	9.5	8.5	7.5	10.5	10.5	10.5	10.5	10.5	9.5	9	7	6	10.5	10.5	10.5	10.5	9.5	9	7	6
5745	149	10	10	10	10	10	9	7.5	6	10	10	10	10	10	9	7.5	6	4.5	10	10	10	10	9	7.5	6	4.5
5765	153	10	10	10	10	10	9	7.5	6	10	10	10	10	10	9	7.5	6	4.5	10	10	10	10	9	7.5	6	4.5
5785	157	10	10	10	10	10	9	7.5	6	10	10	10	10	10	9	7.5	6	4.5	10	10	10	10	9	7.5	6	4.5
5805	161	10	10	10	10	10	9	7.5	6	10	10	10	10	10	9	7.5	6	4.5	10	10	10	10	9	7.5	6	4.5
5825	165	10	10	10	10	10	9	7.5	6	10	10	10	10	10	9	7.5	6	4.5	10	10	10	10	9	7.5	6	4.5

		Target Power [dBm] (average)															
		11n(40HT)															
[MHz]	CH	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
5190	38	7	7	7	7	7	7	7	6	7	7	7	7	7	7	7	6
5230	46	10.5	10.5	10.5	10.5	10.5	8.5	7	6	10.5	10.5	10.5	10.5	10.5	8.5	7	6
5270	54	10.5	10.5	10.5	10.5	10.5	8.5	7	6	10.5	10.5	10.5	10.5	10.5	8.5	7	6
5310	62	8	8	8	8	8	8	7	6	8	8	8	8	8	8	7	6
5510	102	9.5	9.5	9.5	9.5	9.5	8.5	7	6	9.5	9.5	9.5	9.5	9.5	8.5	7	6
5550	110	10.5	10.5	10.5	10.5	10	8.5	7	6	10.5	10.5	10.5	10.5	10	8.5	7	6
5590	118	10.5	10.5	10.5	10.5	10	8.5	7	6	10.5	10.5	10.5	10.5	10	8.5	7	6
5630	126	10.5	10.5	10.5	10.5	10	8.5	7	6	10.5	10.5	10.5	10.5	10	8.5	7	6
5670	134	10.5	10.5	10.5	10.5	10	8.5	7	6	10.5	10.5	10.5	10.5	10	8.5	7	6
5755	151	10	10	10	10	9	7.5	6	4.5	10	10	10	10	9	7.5	6	4.5
5795	159	10	10	10	10	9	7.5	6	4.5	10	10	10	10	9	7.5	6	4.5

2.4. Maximum output power which may possible

(*. The value in a table shows the power on each single antenna. 3dBm is added for MIMO power.)

		Maximum output power which may possible [dBm] (average)																									
		11b				11g								11n(20HT)													
[MHz]	CH	1	2	5.5	11	6	9	12	18	24	36	48	54	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
2412	1	15	15	15	15	10	10	10	10	10	10	10	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2417	2	15	15	15	15	10	10	10	10	10	10	10	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2422	3	15	15	15	15	10	10	10	10	10	10	10	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2427	4	15	15	15	15	15	15	15	15	15	15	13.5	13.5	15	15	15	15	15	13.5	13.5	12	15	15	15	15	15	13.5	13.5	12
2432	5	15	15	15	15	15	15	15	15	15	15	13.5	13.5	15	15	15	15	15	13.5	13.5	12	15	15	15	15	15	13.5	13.5	12
2437	6	15	15	15	15	15	15	15	15	15	15	13.5	13.5	15	15	15	15	15	13.5	13.5	12	15	15	15	15	15	13.5	13.5	12
2442	7	15	15	15	15	15	15	15	15	15	15	13.5	13.5	15	15	15	15	15	13.5	13.5	12	15	15	15	15	15	13.5	13.5	12
2447	8	15	15	15	15	15	15	15	15	15	15	13.5	13.5	15	15	15	15	15	13.5	13.5	12	15	15	15	15	15	13.5	13.5	12
2452	9	15	15	15	15	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
2457	10	15	15	15	15	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
2462	11	15	15	15	15	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5

		Maximum output power which may possible [dBm] (average)																							
		11a								11n(20HT)															
[MHz]	CH	6	9	12	18	24	36	48	54	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
5180	36	13	13	13	13	13	13	11.5	10	13	13	13	13	13	11.5	9.5	8.5	13	13	13	13	13	11.5	9.5	8.5
5200	40	13	13	13	13	13	13	11.5	10	13	13	13	13	13	11.5	9.5	8.5	13	13	13	13	13	11.5	9.5	8.5
5220	44	13	13	13	13	13	13	11.5	10	13	13	13	13	13	11.5	9.5	8.5	13	13	13	13	13	11.5	9.5	8.5
5240	48	13	13	13	13	13	13	11.5	10	13	13	13	13	13	11.5	9.5	8.5	13	13	13	13	13	11.5	9.5	8.5
5260	52	13	13	13	13	13	13	11.5	10	13	13	13	13	13	11.5	9.5	8.5	13	13	13	13	13	11.5	9.5	8.5
5280	56	13	13	13	13	13	13	11.5	10	13	13	13	13	13	11.5	9.5	8.5	13	13	13	13	13	11.5	9.5	8.5
5300	60	13	13	13	13	13	13	11.5	10	13	13	13	13	13	11.5	9.5	8.5	13	13	13	13	13	11.5	9.5	8.5
5320	64	13	13	13	13	13	13	11.5	10	13	13	13	13	13	11.5	9.5	8.5	13	13	13	13	13	11.5	9.5	8.5
5500	100	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5520	104	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5540	108	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5560	112	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5580	116	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5600	120	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5620	124	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5640	128	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5660	132	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5680	136	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5700	140	13	13	13	13	13	12	11	10	13	13	13	13	12	11.5	9.5	8.5	13	13	13	13	12	11.5	9.5	8.5
5745	149	12.5	12.5	12.5	12.5	12.5	11.5	10	8.5	12.5	12.5	12.5	12.5	11.5	10	8.5	7	12.5	12.5	12.5	12.5	11.5	10	8.5	7
5765	153	12.5	12.5	12.5	12.5	12.5	11.5	10	8.5	12.5	12.5	12.5	12.5	11.5	10	8.5	7	12.5	12.5	12.5	12.5	11.5	10	8.5	7
5785	157	12.5	12.5	12.5	12.5	12.5	11.5	10	8.5	12.5	12.5	12.5	12.5	11.5	10	8.5	7	12.5	12.5	12.5	12.5	11.5	10	8.5	7
5805	161	12.5	12.5	12.5	12.5	12.5	11.5	10	8.5	12.5	12.5	12.5	12.5	11.5	10	8.5	7	12.5	12.5	12.5	12.5	11.5	10	8.5	7
5825	165	12.5	12.5	12.5	12.5	12.5	11.5	10	8.5	12.5	12.5	12.5	12.5	11.5	10	8.5	7	12.5	12.5	12.5	12.5	11.5	10	8.5	7

		Maximum output power which may possible [dBm] (average)																
		11n(40HT)																
[MHz]	CH	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	
5190	38	9.5	9.5	9.5	9.5	9.5	9.5	9.5	8.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	8.5	
5230	46	13	13	13	13	13	11	9.5	8.5	13	13	13	13	13	11	9.5	8.5	
5270	54	13	13	13	13	13	11	9.5	8.5	13	13	13	13	13	11	9.5	8.5	
5310	62	10.5	10.5	10.5	10.5	10.5	10.5	9.5	8.5	10.5	10.5	10.5	10.5	10.5	10.5	9.5	8.5	
5510	102	12	12	12	12	12	11	9.5	8.5	12	12	12	12	12	11	9.5	8.5	
5550	110	13	13	13	13	12.5	11	9.5	8.5	13	13	13	13	12.5	11	9.5	8.5	
5590	118	13	13	13	13	12.5	11	9.5	8.5	13	13	13	13	12.5	11	9.5	8.5	
5630	126	13	13	13	13	12.5	11	9.5	8.5	13	13	13	13	12.5	11	9.5	8.5	
5670	134	13	13	13	13	12.5	11	9.5	8.5	13	13	13	13	12.5	11	9.5	8.5	
5755	151	12.5	12.5	12.5	12.5	11.5	10	8.5	7	12.5	12.5	12.5	12.5	11.5	10	8.5	7	
5795	159	12.5	12.5	12.5	12.5	11.5	10	8.5	7	12.5	12.5	12.5	12.5	11.5	10	8.5	7	

Table of Maximum Tune-up Limit

Mode (802.11x) / Band	Average Power (dBm)				
	a	b	g	n(20HT)	n(40HT)
WLAN 2.4 GHz band - Ant.Main		15	15	15	
WLAN 2.4 GHz band - Ant.Sub		15	15	15	
WLAN 2.4 GHz band - Ant.Main+Sub				15	
WLAN 5.2 GHz band (W52) - Ant.Main	13			13	13
WLAN 5.2 GHz band (W52) - Ant.Sub	13			13	13
WLAN 5.2 GHz band (W52) - Ant.Main+Sub				13	13
WLAN 5.3 GHz band (W53) - Ant.Main	13			13	13
WLAN 5.3 GHz band (W53) - Ant.Sub	13			13	13
WLAN 5.3 GHz band (W53) - Ant.Main+Sub				13	13
WLAN 5.6 GHz band (W56) - Ant.Main	13			13	13
WLAN 5.6 GHz band (W56) - Ant.Sub	13			13	13
WLAN 5.6 GHz band (W56) - Ant.Main+Sub				13	13
WLAN 5.8 GHz band (W58) - Ant.Main	12.5			12.5	12.5
WLAN 5.8 GHz band (W58) - Ant.Sub	12.5			12.5	12.5
WLAN 5.8 GHz band (W58) - Ant.Main+Sub				12.5	12.5

(*. The value in a table shows the power on each single antenna. 3dBm is added for MIMO power.)

SECTION 3: Test specification, procedures and results

3.1 Test specification

The US Federal Communications Commission has released the report and order "Guidelines for Evaluating the Environmental Effects of RF Radiation", ET Docket No. 93-62 in August 1996. The order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g for an uncontrolled environment and 8.0 mW/g for an occupational/controlled environment as recommended by the ANSI/IEEE standard C95.1-1992. The device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling in accordance with the following measurement procedures..

KDB 447498 D01 (v06): General RF exposure guidance
KDB 248227 D01 (v02r02): SAR Guidance for IEEE 802.11 (Wi-Fi) transmitters
KDB 865664 D01 (v01r04): SAR measurement 100MHz to 6GHz
IEEE Std. 1528-2013: IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

3.2 Exposure limit

Environments of exposure limit	Whole-Body (averaged over the entire body)	Partial-Body (averaged over any 1g of tissue)	Hands, Wrists, Feet and Ankles (averaged over any 10g of tissue)
(A) Limits for Occupational /Controlled Exposure (W/kg)	0.4	8.0	20.0
(B) Limits for General population /Uncontrolled Exposure (W/kg)	0.08	1.6	4.0

***. Occupational/Controlled Environments:** are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).
***. General Population/Uncontrolled Environments:** are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

The limit applied in this test report is;

General population / uncontrolled exposure, Partial-Body (averaged over any 1g of tissue) limit: 1.6 W/kg

3.3 Procedures and Results

	Wi-Fi (DTS) (2412-2462MHz)		Wi-Fi (U-NII-1) (5180~5240MHz)(W52)		Wi-Fi (U-NII-2A) (5260~5320MHz)(W53)		Wi-Fi (U-NII-2C) (5500~5700MHz)(W56)		Wi-Fi (U-NII-3) (5745~5825MHz)(W58)	
Test Procedure	SAR measurement; KDB 447498, KDB 248227, KDB 865664, IEEE Std.1528									
Category	FCC 47CFR §2.1093 (Portable device)									
Results (SAR(1g))	Complied		Complied		Complied		Complied		Complied	
Antenna#	Main(#0)	Sub(#1)	Main(#0)	Sub(#1)	Main(#0)	Sub(#1)	Main(#0)	Sub(#1)	Main(#0)	Sub(#1)
Liquid type	Body liquid									
Reported SAR value	0.28 W/kg	0.25 W/kg	not applied (*. ≤1.2 W/kg for U-NII-2A)		1.16 W/kg	0.45 W/kg	1.32 W/kg	0.58 W/kg	0.91 W/kg	0.31 W/kg
Measured SAR value	0.231 W/kg	0.208 W/kg	-	-	1.03 W/kg	0.320 W/kg	0.891 W/kg	0.404 W/kg	0.659 W/kg	0.245 W/kg
Operation mode, frequency[MHz]	11b(1Mbps), 2412	11b(1Mbps), 2412	-	-	11a(6Mbps), 5260	11a(6Mbps), 5260	n20(MCS0), 5700	11a(6Mbps), 5700	n40(MCS0), 5755	11a(6Mbps), 5745
Duty cycle [%] (scaled factor)	99.6 (×1.00)	99.6 (×1.00)	-	-	98.5 (×1.02)	98.5 (×1.02)	98.4 (×1.02)	98.5 (×1.02)	96.6 (×1.04)	98.5 (×1.02)
Output power [dBm] (max. power, scaled factor)	14.19 (15, ×1.21)	14.28 (15, ×1.18)	-	-	12.57 (13, ×1.10)	11.61 (13, ×1.38)	11.39 (13, ×1.45)	11.50 (13, ×1.40)	11.30 (13, ×1.32)	11.59 (13, ×1.23)
Liquid type	Head liquid (by Flat phantom)									
Reported SAR value	0.29 W/kg	0.26 W/kg	not applied (*. ≤1.2 W/kg for U-NII-2A)		1.17 W/kg	0.47 W/kg	1.31 W/kg	0.56 W/kg	1.00 W/kg	0.37 W/kg
Measured SAR value	0.240 W/kg	0.221 W/kg	-	-	1.04 W/kg	0.334 W/kg	0.885 W/kg	0.447 W/kg	0.813 W/kg	0.291 W/kg
Operation mode, frequency[MHz]	11b(1Mbps), 2412	11b(1Mbps), 2412	-	-	11a(6Mbps), 5260	11a(6Mbps), 5260	n20(MCS0), 5700	n40(MCS0), 5550	11a(6Mbps), 5745	11a(6Mbps), 5745
Duty cycle [%] (scaled factor)	99.6 (×1.00)	99.6 (×1.00)	-	-	98.5 (×1.02)	98.5 (×1.02)	98.4 (×1.02)	96.6(×1.04)	98.5 (×1.02)	98.5 (×1.02)
Output power [dBm] (max. power, scaled factor)	14.19 (15, ×1.21)	14.28 (15, ×1.18)	-	-	12.57 (13, ×1.10)	11.61 (13, ×1.38)	11.39 (13, ×1.45)	12.22 (13, ×1.20)	11.70 (13, ×1.20)	11.59 (13, ×1.23)

Note: UL Japan's SAR Work Procedures No.13-EM-W0429 and 13-EM-W0430. No addition, deviation nor exclusion has been made from standards
*. (KDB248227 D01 (v02r02), clause 5.3.1) Since highest reported SAR(1g) of W53 band was ≤1.2 W/kg, SAR measurement of W52 band was omitted.
*. (Calculating formula) Corrected SAR to max.power (W/kg) = (Measured SAR (W/kg)) × (Duty scaled) × (Tune-up factor)
where; Tune-up factor [-] = 1 / (10 ^ ("Δmax (max.power - burst average power), dB" / 10)), Duty scaled factor [-] = 100(%) / (duty cycle, %)

3.4 Test Location

No.7 shielded room (2.76m (Width) × 3.76m (Depth) × 2.4m (Height)) for SAR testing.

UL Japan, Inc., Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken 259-1220 JAPAN
Telephone number: +81 463 50 6400 / Facsimile number: +81 463 50 6401

3.5 Confirmation before SAR testing

3.5.1 Average power for SAR tests

Before SAR test, the RF wiring for the sample had been switched to the antenna conducted power measurement line from the antenna line and the average power was measured. The result is shown in Section 6.

*. The EUT transmission power was verified that it was within 2dB lower than the maximum tune-up tolerance limit when it was set the rated power. (Clause 4.1, KDB447498 D01 (v06))

Step.1 Data rate check (*****. The EUT supported the following data rate in each operation mode.)

11b		11g		11a		11n(20HT)						11n(40HT)					
Mod (DSSS)	Data rate	Mod (OFDM)	Data rate	Mod (OFDM)	Data rate	MCS Index	Spatial Stream	Mod (OFDM)	MCS Index	Spatial Stream	Mod (OFDM)	MCS Index	Spatial Stream	Mod (OFDM)	MCS Index	Spatial Stream	Mod (OFDM)
DBPSK	1 Mbps	BPSK	6 Mbps	BPSK	6 Mbps	MCS0	1	BPSK	MCS8	2	BPSK	MCS0	1	BPSK	MCS8	2	BPSK
DQPSK	2 Mbps	BPSK	9 Mbps	BPSK	9 Mbps	MCS1	1	QPSK	MCS9	2	QPSK	MCS1	1	QPSK	MCS9	2	QPSK
CCK	5.5 Mbps	QPSK	12 Mbps	QPSK	12 Mbps	MCS2	1	QPSK	MCS10	2	QPSK	MCS2	1	QPSK	MCS10	2	QPSK
CCK	11 Mbps	QPSK	18 Mbps	QPSK	18 Mbps	MCS3	1	16QAM	MCS11	2	16QAM	MCS3	1	16QAM	MCS11	2	16QAM
*:Mod; Modulation		16QAM	24 Mbps	16QAM	24 Mbps	MCS4	1	16QAM	MCS12	2	16QAM	MCS4	1	16QAM	MCS12	2	16QAM
		16QAM	36 Mbps	16QAM	36 Mbps	MCS5	1	64QAM	MCS13	2	64QAM	MCS5	1	64QAM	MCS13	2	64QAM
		64QAM	48 Mbps	64QAM	48 Mbps	MCS6	1	64QAM	MCS14	2	64QAM	MCS6	1	64QAM	MCS14	2	64QAM
		64QAM	54 Mbps	64QAM	54 Mbps	MCS7	1	64QAM	MCS15	2	64QAM	MCS7	1	64QAM	MCS15	2	64QAM

Step.2 Consideration of SAR test channel

For the SAR test reference, on each operation band, the average output power was measured on the lower/middle/upper and specified channels with the worst data rate condition in step 1 in the above.

3.6 Confirmation after SAR testing

It was checked that the power drift [W] is within ±5% in the evaluation procedure of SAR testing. The verification of power drift during the SAR test is that DASY5 system calculates the power drift by measuring the e-filed at the same location at beginning and the end of the scan measurement for each test position.
The result is shown in APPENDIX 2.

*. DASY5 system calculation Power drift value[dB] =20log(Ea)/(Eb) (where, Before SAR testing: Eb[V/m] / After SAR testing: Ea[V/m])

Limit of power drift[W] = ±5%
Power drift limit (X) [dB] = 10log(P_drift)=10log(1.05/1)=10log(1.05)-10log(1)=0.21dB
from E-filed relations with power.
$S=E\times H=E^2/\eta=P/(4\times\pi\times r^2)$ (η: Space impedance) → $P=(E^2\times4\times\pi\times r^2)/\eta$
Therefore, The correlation of power and the E-filed
Power drift limit (X) dB=10log(P_drift)=10log(E_drift)^2=20log(E_drift)
From the above mentioned, **the calculated power drift of DASY5 system must be the less than ±0.21dB.**

3.7 Test setup of EUT and SAR measurement procedure

After considering the outline of Flat Panel Sensor, the SAR test was carried out on the following setup conditions.

Setup	Explanation of EUT setup position (*. Refer to Appendix 1 for test setup photographs.)	Antenna Main (chain 0)		Antenna Sub (chain 1)	
		Separation [mm]	SAR Tested /Reduced	Separation [mm]	SAR Tested /Reduced
Front	The front surface (patient side) of EUT was touched to the Flat phantom.	**3.9**	**Tested (*1)**	**3.9**	**Tested (*1)**
Back	The back surface (operator side) of EUT was touched to the Flat phantom.	**2.0**	**Tested (*1)**	**2.0**	**Tested (*1)**
Long(L) side (Main)	The long side edge surface (antenna Main side) of EUT was touched to the Flat phantom.	**1.7**	**Tested** (*1)	**313.7**	Reduced (>200 mm)
Long(L) side (no antenna)	The long side edge surface (no antenna) of EUT was touched to the Flat phantom.	**380.3**	Reduced (>200 mm)	**35.3**	Reduced (*1)
Short(S) side (Sub)	The short side edge surface (antenna Sub side) of EUT was touched to the Flat phantom.	**394.3**	Reduced (>200 mm)	**1.7**	**Tested** (*1)
Short(S) side (no antenna)	The short side edge surface (no antenna) of EUT was touched to the Flat phantom.	**30.7**	Reduced (*1)	**456.3**	Reduced (>200 mm)

*. **Separation:** Antenna separation distance. It is the distance from the antenna to the outer surface of EUT form which a human may touch.
*. Size of EUT: 460 (W) × 384 (D) × 15 (thickness) [mm]

(cont'd)

(cont'd)

*1. KDB 447498 D01 (v06) was taken into consideration to reduce SAR test.

Consideration of SAR test reduction by the antenna separation distance (100MHz~6GHz, ≤50mm)											
Band, Mode	Setup Position	Minimum distance [mm]	Minimum distance [mm] (rounded)	Upper frequency [GHz]	Maximum power [dBm]	Maximum power [mW]	Maximum power [mW] (rounded)	Calculation of exclusion: ≤ 3.0 (*2)	Standalone SAR Test Required? (*.If>3, Required)		Remarks
WLAN 2.4GHz b,g n(20HT)	Long side (Main), Short side (Sub)	1.7	**2 (≤5)**	2.462	15.0	31.62	**32**	**10.0**	***>3.0***	**Required**	-
	Back (Main, Sub)	2.0	**2 (≤5)**					**10.0**	***>3.0***	**Required**	-
	Front (Main, Sub)	3.9	**4 (≤5)**					**10.0**	***>3.0***	**Required**	-
	Short side (no antenna) (Main)	30.7	**31**					**1.6**	***<3.0***	*Reduced*	-
	Long side (no antenna) (Sub)	35.3	**35**					**1.4**	***<3.0***	*Reduced*	-
WLAN W52&53 a,n(20HT) n(40HT)	Long side (Main), Short side (Sub)	1.7	**2 (≤5)**	5.32	13.0	19.95	**20**	**9.2**	***>3.0***	**Required**	-
	Back (Main, Sub)	2.0	**2 (≤5)**					**9.2**	***>3.0***	**Required**	-
	Front (Main, Sub)	3.9	**4 (≤5)**					**9.2**	***>3.0***	**Required**	-
	Short side (no antenna) (Main)	30.7	**31**					**1.5**	***<3.0***	*Reduced*	-
	Long side (no antenna) (Sub)	35.3	**35**					**1.3**	***<3.0***	*Reduced*	-
WLAN W56 a,n(20HT) n(40HT)	Long side (Main), Short side (Sub)	1.7	**2 (≤5)**	5.7	13.0	19.95	**20**	**9.5**	***>3.0***	**Required**	-
	Back (Main, Sub)	2.0	**2 (≤5)**					**9.5**	***>3.0***	**Required**	-
	Front (Main, Sub)	3.9	**4 (≤5)**					**9.5**	***>3.0***	**Required**	-
	Short side (no antenna) (Main)	30.7	**31**					**1.5**	***<3.0***	*Reduced*	-
	Long side (no antenna) (Sub)	35.3	**35**					**1.4**	***<3.0***	*Reduced*	-
WLAN W58 a,n(20HT) n(40HT)	Long side (Main), Short side (Sub)	1.7	**2 (≤5)**	5.825	12.5	17.78	**18**	**8.7**	***>3.0***	**Required**	-
	Back (Main, Sub)	2.0	**2 (≤5)**					**8.7**	***>3.0***	**Required**	-
	Front (Main, Sub)	3.9	**4 (≤5)**					**8.7**	***>3.0***	**Required**	-
	Short side (no antenna) (Main)	30.7	**31**					**1.4**	***<3.0***	*Reduced*	-
	Long side (no antenna) (Sub)	35.3	**35**					**1.2**	***<3.0***	*Reduced*	-

*2. Parenthesis 1), Clause 4.3.1, KDB 447498 D01 (v06) gives the following formula to calculate the SAR(1g) test exclusion thresholds for 100MHz-6GHz at test separation distance ≤50mm.

[(max.power of channel, including tune-up tolerance, mW) / (min.test separation distance, mm)] × [√f(GHz)] ≤ 3.0 (for SAR(1g)) ····· formula (1)

If power is calculated from the upper formula (1);

[SAR(1g) test exclusion thresholds, mW] = 3 × [test separation distance, mm] / [√f(GHz)] ····· formula (2)

[SAR(1g) test exclusion thresholds, mW] = 3 × 50 / SQRT(2.462) = 96mW, where test separation distance=50mm

*** Simultaneous transmission evaluation**

Parenthesis 2) and 3), Clause 4.3.2, KDB 447498 D01 (v06) gives the following formula to calculate the simultaneous transmission SAR test exclusion limit. (SPLSR: SAR to peak location separation ratio must be ≤ 0.04 for antenna pair.)

Calculating formula:

Estimate standalone SAR(1g) = [(max.power, mW) / (min.test separation distance, mm)] × [√f(GHz)] / [7.5]

SPLSR (SAR to Peak Location Separation Ratio) = {(SAR_Ant.Main, W/kg) + (SAR_Ant.Sub, W/kg)} ^1.5 / (Ant.Maim<->Ant.Sub distance, mm)

General Note:

When there is standalone SAR(1g) of antenna Main and antenna Sub within a limit (≤1.6 W/kg) because the antenna separation distance is big enough (>300 mm), SPLSR is smaller than 0.04, so SAR for co-location (volume scan) can be reduced.

Position	Antenna separation distance [mm]	Max. Standalone SAR(1g) [W/kg] ant.Main.	Max. Standalone SAR(1g) [W/kg] ant.Sub	Σ1g SAR [W/kg] (≤ 1.6)	SPLSR (Yes/No)	SPLSR (≤ 0.04)	Volume scan (Yes/No)	Remarks
Front (Patient)	≈ 500	1.6 (*.limit)	1.6 (*.limit)	3.2	Yes	**0.011**	No	-
Long side (Main)	≈ 390	1.6 (*.limit)	1.6 (*.limit)	3.2	Yes	**0.015**	No	-
Short side (Sub)	≈ 310	1.6 (*.limit)	1.6 (*.limit)	3.2	Yes	**0.018**	No	-

By the determined test setup shown above, the SAR test was applied in the following procedures.

Step 1 ~ Step 2	On 2.4GHz band, in body liquid, worst SAR search by DSSS mode. Add test for OFDM mode, if it's necessary. Repeat test in head liquid (Step 2).
Step 3 ~ Step 8	On 5GHz band, in body liquid, worst SAR search by largest channel bandwidth mode with highest power. (Step 3: W52/53 band, Step 4: W56 band, Step 5: W58 band) Repeat test in head liquid. (Step 6: W52/53 band, Step 7: W56 band, Step 8: W58 band) *. Check SAR measurement variability, when if the measured SAR(1g) was ≥ 0.80 W/kg and on a highest measured SAR(1g) condition in 5GHz band.

*. During SAR test, the radiated power is always monitored by Spectrum Analyzer.

SECTION 4: Uncertainty Assessment (SAR measurement)

Uncertainty of SAR measurement (2.4-6GHz) (*.ε&σ: ≤ ± 5%, DAK3.5, Tx: ≈100% duty cycle) (v08)	1g SAR	10g SAR
Combined measurement uncertainty of the measurement system (k=1)	± 13.7%	± 13.6%
Expanded uncertainty (k=2)	± 27.4%	± 27.2%

	Error Description (2.4-6GHz) (v08)	Uncertainty Value	Probability distribution	Divisor	ci (1g)	ci (10g)	ui (1g)	ui (10g)	Vi, veff
A	**Measurement System** (DASY5)						(std. uncertainty)	(std. uncertainty)	
1	Probe Calibration Error	±6.55 %	Normal	1	1	1	±6.55 %	±6.55 %	∞
2	Axial isotropy Error	±4.7 %	Rectangular	√3	√0.5	√0.5	±1.9 %	±1.9 %	∞
3	Hemispherical isotropy Error	±9.6 %	Rectangular	√3	√0.5	√0.5	±3.9 %	±3.9 %	∞
4	Linearity Error	±4.7 %	Rectangular	√3	1	1	±2.7 %	±2.7 %	∞
5	Probe modulation response	±2.4 %	Rectangular	√3	1	1	±1.4 %	±1.4 %	∞
6	Sensitivity Error (detection limit)	±1.0 %	Rectangular	√3	1	1	±0.6 %	±0.6 %	∞
7	Boundary effects Error	±4.3%	Rectangular	√3	1	1	±2.5 %	±2.5 %	∞
8	Readout Electronics Error(DAE)	±0.3 %	Rectangular	√3	1	1	±0.3 %	±0.3 %	∞
9	Response Time Error	±0.8 %	Normal	1	1	1	±0.8 %	±0.8 %	∞
10	Integration Time Error (≈100% duty cycle)	±0 %	Rectangular	√3	1	1	0 %	0 %	∞
11	RF ambient conditions-noise	±3.0 %	Rectangular	√3	1	1	±1.7 %	±1.7 %	∞
12	RF ambient conditions-reflections	±3.0 %	Rectangular	√3	1	1	±1.7 %	±1.7 %	∞
13	Probe positioner mechanical tolerance	±3.3 %	Rectangular	√3	1	1	±1.9 %	±1.9 %	∞
14	Probe Positioning with respect to phantom shell	±6.7 %	Rectangular	√3	1	1	±3.9 %	±3.9 %	∞
15	Max. SAR evaluation (Post-processing)	±4.0 %	Rectangular	√3	1	1	±2.3 %	±2.3 %	∞
B	**Test Sample Related**								
16	Device Holder or Positioner Tolerance	±3.6 %	Normal	1	1	1	±3.6 %	±3.6 %	5
17	Test Sample Positioning Error	±5.0 %	Normal	1	1	1	±5.0 %	±5.0 %	145
18	Power scaling	±0%	Rectangular	√3	1	1	±0 %	±0 %	∞
19	Drift of output power (measured, <0.2dB)	±2.3%	Rectangular	√3	1	1	±2.9 %	±2.9 %	∞
C	**Phantom and Setup**								
20	Phantom uncertainty (shape, thickness tolerances)	±7.5 %	Rectangular	√3	1	1	±4.3 %	±4.3 %	∞
21	Algorithm for correcting SAR (ε',σ: ≤5%)	±1.2 %	Normal	1	1	0.84	±1.2 %	±0.97 %	∞
22	Measurement Liquid Conductivity Error (DAK3.5)	±3.0 %	Normal	1	0.78	0.71	±2.3 %	±2.1 %	7
23	Measurement Liquid Permittivity Error (DAK3.5)	±3.1 %	Normal	1	0.23	0.26	±0.7 %	±0.8 %	7
24	Liquid Conductivity-temp.uncertainty (≤2deg.C.)	±5.3 %	Rectangular	√3	0.78	0.71	±2.4 %	±2.2 %	∞
25	Liquid Permittivity-temp.uncertainty (≤2deg.C.)	±0.9 %	Rectangular	√3	0.23	0.26	±0.1 %	±0.1 %	∞
	Combined Standard Uncertainty						**±13.7** %	**±13.6** %	733
	Expanded Uncertainty (k=2)						**±27.4 %**	**±27.2 %**	

*. Table of uncertainties are listed for ISO/IEC 17025.
*. This measurement uncertainty budget is suggested by IEEE Std.1528(2013) and determined by Schmid & Partner Engineering AG (DASY5 Uncertainty Budget). Per KDB 865664 D01 (v01r04) SAR Measurement 100 MHz to 6 GHz Section 2.8.1., when the highest measured SAR(1g) within a frequency band is < 1.5W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std.1528 (2013) is not required in SAR reports submitted for equipment approval.

SECTION 5: Operation of EUT during testing

5.1 Operating modes for SAR testing

This EUT has IEEE 802.11b, g, a, n(20HT) and n(40HT)(*. 5GHz band only) continuous transmitting modes. The frequency and the modulation used in the SAR testing are shown as a following.

Operation mode		b	g	n20	a	n20	n40	a	n20	n40	a	n20	n40	a	n20	n40
band		DTS			U-NII-1(W52)			U-NII-2A(W53)			U-NII-2C(W56)			U-NII-3(W58)		
Tx band [MHz]		2412~2462			5180~5240		5190, 5230	5260~5320		5270, 5310	5500~5700		5510 ~5670	5745~5825		5755, 5795
Bandwidth [MHz]		20	20	20	20	20	40	20	20	40	20	20	40	20	20	40
Max.power [dBm]		15	15	15	13	13	13	13	13	13	13	13	13	12.5	12.5	12.5
Modulation		DSSS	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM	OFDM
Data rate [Mbps]		1	6	MCS0	6	MCS0	MCS0	6	MCS0	MCS0	6	MCS0	MCS0	6	MCS0	MCS0
Frequency tested [MHz]	ant#0	*1	Reduced	Reduced	Reduced	Reduced	Reduced	*1	Reduced	*1	*1	*1	*1	*1	Reduced	*1
	ant#1	*1	Reduced	Reduced	Reduced	Reduced	Reduced	*1	Reduced	*1	*1	Reduced	*1	*1	Reduced	*1
Controlled software		**Wireless authentication test tool (Gaia proto) ver.1.3.0.2** Setting parameters; Tx mode: TX99 / Data pattern: PN9 pattern / Short GI: Disable / Packet size: 32 / Antenna: Chain 0: Main, China 1: Sub, Chain both: MIMO *. The value of "Power" cell of software was adjusted so that measurement power might be satisfied within 2dB of the maximum power.														

(cont'd)

***1. SAR test reduction consideration**

[Table 1. (Body liquid) Output power and SAR test channel selection and Reported SAR(1g) [W/kg] (Results) and test reduction plan]

802.11 Modes		b	g (*4)	n(1Tx) (*4)	n(2Tx) (*4,5)	a (*2)	n(1Tx)	n(2Tx) (*5)	n(1Tx)	n(2Tx) (*5)
Ch. Bandwidth [MHz]		20	20	20	20	20	20	20	40	40
Lowest data rate [Mbps]		1	6	MCS0	MCS8	6	MCS0	MCS8	MCS0	MCS8
2.4GHz	Ch.	*1/6/11*	*1/6/11*	*1 6/11*	*1 6/11*					
	Max,mW	32/32/32	10/32/14	6/32/7	6/32/7					
Ant. Main	AT,mW	26/23/23	7/27/10	5/27/5	4/26/5					
	Rp.SAR1g	**0.28 /0.23 /0.22**	11b: ≤0.8w/kg	11b: ≤0.8w/kg	11b: ≤0.8w/kg					
Ant. Sub	AT,mW	27/25/22	8/29/11	5/28/5	5/28/5					
	Rp.SAR1g	**0.25 /0.19 /0.18**	11b: ≤0.8w/kg	11b: ≤0.8w/kg	11b: ≤0.8w/kg					
W52	Ch.					*36/40/44/48*	*36/40/44/48*	*36/40/44/48*	*38/46*	*38/46*
	Max,mW					20/20/20/20	20/20/20/20	20/20/20/20	9/20	9/20
Ant. Main	AT,mW					16/16/16/16	16/17/16/16	17/17/16/14	8/17	8/16
	Rp.SAR1g					Reduced (W53:≤1.2w/kg) (*3)				
Ant. Sub	AT,mW					16/16/17/14	16/16/16/13	16/15/15/13	7/16	6/13
	Rp.SAR1g					Reduced (W53:≤1.2w/kg) (*3)				
W53	Ch.					*52/56/60/64*	*52/56/60/64*	*52/56/60/64*	*54/62*	*54/62*
	Max,mW					20/20/20/20	20/20/20/20	20/20/20/20	20/11	20/11
Ant. Main	AT,mW					18/16/16/17	17/16/16/16	19/17/16/16	17/9	18/10
	Rp.SAR1g					**1.16 /1.08 /1.07**	Reduced (a: <1.2w/kg)	<-standalone SAR	**1.08**	<-standalone SAR
Ant. Sub	AT,mW					14/15/14/15	14/13/13/15	13/13/13/15	16/8	17/7
	Rp.SAR1g					**0.45 /0.36 /0.40**	Reduced (a: <1.2w/kg)	<-standalone SAR	**0.28**	<-standalone SAR
W56	Ch.					*100/116/120/140*	*100/116/120/140*	*100/116/120/140*	*102/110/118/134*	*102/110/118/134*
	Max,mW					20/20/20/20	20/20/20/20	20/20/20/20	16/20/20/20	16/20/20/20
Ant. Main	AT,mW					18/16/19/15	17/17/19/14	14/14/16/14	12/19/18/16	11/18/16/14
	Rp.SAR1g					**0.70 /0.84 /0.84 /1.25**	**0.78 /0.82 /0.85 /1.32**	<-standalone SAR	**0.51 /0.77 /0.89 /1.21**	<-standalone SAR
Ant. Sub	AT,mW					15/14/14/14	14/13/14/14	14/13/14/14	13/17/14/13	13/16/14/13
	Rp.SAR1g					**0.56 /0.49 /0.58**	Reduced (a: <1.2w/kg)	<-standalone SAR	**0.41 /0.57 /0.46 /0.45**	<-standalone SAR
W58	Ch.					*149/157/165*	*149/157/165*	*149/157/165*	*151/159*	*151/159*
	Max,mW					18/18/18	18/18/18	18/18/18	18/18	18/18
Ant. Main	AT,mW					15/14/12	15/14/12	13/12/12	13/13	12/13
	Rp.SAR1g					**0.89 /0.83 /0.77**	Reduced (a: <1.2w/kg)	<-standalone SAR	**0.91 / 0.82**	<-standalone SAR
Ant. Sub	AT,mW					14/13/12	14/12/12	14/13/12	13/13	13/13
	Rp.SAR1g					**0.31 /0.26 /0.30**	Reduced a: (<1.2w/kg)	<-standalone SAR	**0.29 /0.21**	<-standalone SAR

[Table 2. (Head liquid) Output power and SAR test channel selection and Reported SAR(1g) [W/kg] (Results) and test reduction plan]

802.11 Modes		b	g (*4)	n(1Tx) (*4)	n(2Tx) (*4,5)	a (*2)	n(1Tx)	n(2Tx) (*5)	n(1Tx)	n(2Tx) (*5)
Ch. Bandwidth [MHz]		20	20	20	20	20	20	20	40	40
Lowest data rate [Mbps]		1	6	MCS0	MCS8	6	MCS0	MCS8	MCS0	MCS8
2.4GHz	Ch.	*1/6/11*	*1/6/11*	*1 6/11*	*1 6/11*					
	Max,mW	32/32/32	10/32/14	6/32/7	6/32/7					
Ant. Main	AT,mW	26/23/23	7/27/10	5/27/5	4/26/5					
	Rp.SAR1g	**0.29 /0.24 /0.23**	11b: ≤0.8w/kg	11b: ≤0.8w/kg	11b: ≤0.8w/kg					
Ant. Sub	AT,mW	27/25/22	8/29/11	5/28/5	5/28/5					
	Rp.SAR1g	**0.26 /0.21 /0.21**	11b: ≤0.8w/kg	11b: ≤0.8w/kg	11b: ≤0.8w/kg					
W52	Ch.					*36/40/44/48*	*36/40/44/48*	*36/40/44/48*	*38/46*	*38/46*
	Max,mW					20/20/20/20	20/20/20/20	20/20/20/20	9/20	9/20
Ant. Main	AT,mW					16/16/16/16	16/17/16/16	17/17/16/14	8/17	8/16
	Rp.SAR1g					Reduced (W53:≤1.2w/kg) (*3)				
Ant. Sub	AT,mW					16/16/17/14	16/16/16/13	16/15/15/13	7/16	6/13
	Rp.SAR1g					Reduced (W53:≤1.2w/kg) (*3)				
W53	Ch.					*52/56/60/64*	*52/56/60/64*	*52/56/60/64*	*54/62*	*54/62*
	Max,mW					20/20/20/20	20/20/20/20	20/20/20/20	20/11	20/11
Ant. Main	AT,mW					18/16/16/17	17/16/16/16	19/17/16/16	17/9	18/10
	Rp.SAR1g					**1.17 /1.10 /1.12**	Reduced (a: <1.2w/kg)	<-standalone SAR	**1.05**	<-standalone SAR
Ant. Sub	AT,mW					14/15/14/15	14/13/13/15	13/13/13/15	16/8	17/7
	Rp.SAR1g					**0.47 /0.38 /0.41**	Reduced (a: <1.2w/kg)	<-standalone SAR	**0.31**	<-standalone SAR
W56	Ch.					*100/116/120/140*	*100/116/120/140*	*100/116/120/140*	*102/110/118/134*	*102/110/118/134*
	Max,mW					20/20/20/20	20/20/20/20	20/20/20/20	16/20/20/20	16/20/20/20
Ant. Main	AT,mW					18/16/19/15	17/17/19/14	14/14/16/14	12/19/18/16	11/18/16/14
	Rp.SAR1g					**0.72 /0.81 /0.82 /1.23**	**0.73 /0.77 /0.82 /1.31**	<-standalone SAR	**0.51 /0.74 /0.86 /1.18**	<-standalone SAR
Ant. Sub	AT,mW					15/14/14/14	14/13/14/14	14/13/14/14	13/17/14/13	13/16/14/13
	Rp.SAR1g					**0.49 /0.48 /0.44 /0.53**	Reduced (a: <1.2w/kg)	<-standalone SAR	**0.39 /0.56 /0.45 /0.53**	<-standalone SAR
W58	Ch.					*149/157/165*	*149/157/165*	*149/157/165*	*151/159*	*151/159*
	Max,mW					18/18/18	18/18/18	18/18/18	18/18	18/18
Ant. Main	AT,mW					15/14/12	15/14/12	13/12/12	13/13	12/13
	Rp.SAR1g					**1.00 /0.90 /0.80**	Reduced (a: <1.2w/kg)	<-standalone SAR	**0.96 / 0.82**	<-standalone SAR
Ant. Sub	AT,mW					14/13/12	14/12/12	14/13/12	13/13	13/13
	Rp.SAR1g					**0.37 /0.31 /0.35**	Reduced (a: <1.2w/kg)	<-standalone SAR	**0.34 /0.27**	<-standalone SAR

*. Ch: Channel, Max: Maximum power in specification, AT: Antenna terminal conducted average power measured, SAR(1g): Reported SAR(1g) [W/kg] with tuned-up
*. The SAR testing was applied to lower, middle and upper channels for the worst SAR condition in each operation band.
*2. (KDB248227 D01 (v02r02)) At same specified maximum output power mode, the largest channel bandwidth, the lower order modulation and lowest data rate configuration was selected. However, lowest order modulation with 20MHz channel bandwidth mode (11a) was shown the higher SAR result. Therefore the inspection of SAR test setup was performed by 11a mode in all 5GHz band.
*3. (KDB248227 D01 (v02r02)) Since highest reported SAR(1g) of U-NII-2A was ≤1.2 W/kg, SAR measurement of U-NII-1 band was omitted.
*4. (KDB248227 D01 (v02r02)) On 2.4GHz band, SAR test of OFDM mode was reduced, because the estimate reported SAR of OFDM mode was ≤ 1.2 W/kg by using the highest reported SAR of DSSS mode.
*5. (KDB447498 D01(v06)) Since SPLSR (SAR to peak location separation ratio) was enough smaller than 0.04, SAR test of MIMO mode was reduced.

SECTION 6: Confirmation before testing

6.1 Assessment for the antenna terminal port conducted power of EUT (Worst data rate, worst channel determination)

Mode	Freq.	Data rate	Power spec.		Duty cycle			Main antenna (chain #0) power					Sub antenna (chain #1) power					MIMO (Ant.0+1) power				Power Tune -up?
			Typical	Max.	duty cycle	factor	scaled factor	Set pwr.	Time average	Δ Max.	Tune-up factor	SAR Tested?	Set pwr.	Time average	Δ Max.	Tune-up factor	SAR Tested?	MIMO target	MIMO max.	SUM Ave.	Δ Max.	
	[MHz]	[Mbps]	[dBm]	[dBm]	[%]	[dB]	[-]	[dBm]	[dBm]	[dB]	[-]		[dBm]	[dBm]	[dB]	[-]		[dBm]	[dBm]	[dBm]	[dB]	
11b	2412	1	12.5	15.0	99.6	0.02	×1.00	13	**14.19**	-0.81	×1.21	**Tested**	13	**14.28**	-0.72	×1.18	**Tested**					Tuned
	2437	1	12.5	15.0	99.6	0.02	×1.00	13	13.68	-1.32	×1.36	**Tested**	13	13.92	-1.08	×1.28	**Tested**					Tuned
	2462	1	12.5	15.0	99.6	0.02	×1.00	13	13.59	-1.41	×1.38	**Tested**	13	13.48	-1.52	×1.42	**Tested**					Tuned
11g	2412	6	7.5	10.0	97.4	0.11	×1.03	8	8.60	-1.40	×1.38	-	8	9.19	-0.81	×1.21	-					Tuned
	2427	6	12.5	15.0	97.4	0.11	×1.03	14	**14.60**	-0.40	×1.10	-	14	**14.67**	-0.33	×1.08	-					Tuned
	2437	6	12.5	15.0	97.4	0.11	×1.03	14	14.30	-0.70	×1.17	-	14	14.56	-0.44	×1.11	-					Tuned
	2447	6	12.5	15.0	97.4	0.11	×1.03	14	14.33	-0.67	×1.17	-	14	14.16	-0.84	×1.21	-					Tuned
	2462	6	9.0	11.5	97.4	0.11	×1.03	10	10.01	-1.49	×1.41	-	10	10.22	-1.28	×1.34	-					Tuned
11n (HT20) (1Tx)	2412	MCS0	5.5	8.0	96.9	0.14	×1.03	6	6.73	-1.27	×1.34	-	6	7.13	-0.87	×1.22	-					Tuned
	2427	MCS0	12.5	15.0	96.9	0.14	×1.03	14	**14.59**	-0.41	×1.10	-	14	**14.52**	-0.48	×1.12	-					Tuned
	2437	MCS0	12.5	15.0	96.9	0.14	×1.03	14	14.25	-0.75	×1.19	-	14	14.51	-0.49	×1.12	-					Tuned
	2447	MCS0	12.5	15.0	96.9	0.14	×1.03	14	14.24	-0.76	×1.19	-	14	13.98	-1.02	×1.26	-					Tuned
	2462	MCS0	6.0	8.5	96.9	0.14	×1.03	7	6.99	-1.51	×1.42	-	7	7.24	-1.26	×1.34	-					Tuned
11n (HT20) (2Tx)	2412	MCS8	5.5	8.0	94.3	0.25	×1.06	6	6.46	-1.54	×1.43	-	6	7.30	-0.70	×1.17	-	8.5	11.0	9.91	-1.09	Tuned
	2427	MCS8	12.5	15.0	94.3	0.25	×1.06	14	**14.55**	-0.45	×1.11	-	14	**14.54**	-0.46	×1.11	-	15.5	18.0	17.55	-0.45	Tuned
	2437	MCS8	12.5	15.0	94.3	0.25	×1.06	14	14.18	-0.82	×1.21	-	14	14.42	-0.58	×1.14	-	15.5	18.0	17.31	-0.69	Tuned
	2447	MCS8	12.5	15.0	94.3	0.25	×1.06	14	14.12	-0.88	×1.22	-	14	14.02	-0.98	×1.25	-	15.5	18.0	17.08	-0.92	Tuned
	2462	MCS8	6.0	8.5	94.3	0.25	×1.06	7	6.77	-1.73	×1.49	-	7	7.33	-1.17	×1.31	-	9.0	11.5	10.07	-1.43	Tuned
11a	5180	6	10.5	13.0	98.5	0.07	×1.02	12	12.11	-0.89	×1.23	-	12	12.16	-0.84	×1.21	-					Tuned
	5200	6	10.5	13.0	98.5	0.07	×1.02	12	12.00	-1.00	×1.26	-	12	12.08	-0.92	×1.24	-					Tuned
	5220	6	10.5	13.0	98.5	0.07	×1.02	12	**12.14**	-0.86	×1.22	-	12	**12.20**	-0.80	×1.20	-					Tuned
	5240	6	10.5	13.0	98.5	0.07	×1.02	12	12.03	-0.97	×1.25	-	12	11.33	-1.67	×1.47	-					Tuned
	5260	6	10.5	13.0	98.5	0.07	×1.02	12	**12.57**	-0.43	×1.10	**Tested**	13	11.61	-1.39	×1.38	**Tested**					Tuned
	5280	6	10.5	13.0	98.5	0.07	×1.02	12	12.12	-0.88	×1.22	-	13	11.65	-1.35	×1.36	-					Tuned
	5300	6	10.5	13.0	98.5	0.07	×1.02	12	12.14	-0.86	×1.22	**Tested**	13	11.54	-1.46	×1.40	**Tested**					Tuned
	5320	6	10.5	13.0	98.5	0.07	×1.02	12	12.35	-0.65	×1.16	**Tested**	13	**11.78**	-1.22	×1.32	**Tested**					Tuned
	5500	6	10.5	13.0	98.5	0.07	×1.02	12	12.46	-0.54	×1.13	**Tested**	12	**11.80**	-1.20	×1.32	**Tested**					Tuned
	5580	6	10.5	13.0	98.5	0.07	×1.02	12	12.06	-0.94	×1.24	**Tested**	12	11.33	-1.67	×1.47	**Tested**					Tuned
	5600	6	10.5	13.0	98.5	0.07	×1.02	12	**12.82**	-0.18	×1.04	**Tested**	12	11.55	-1.45	×1.40	-					Tuned
	5700	6	10.5	13.0	98.5	0.07	×1.02	12	11.82	-1.18	×1.31	**Tested**	12	11.50	-1.50	×1.41	**Tested**					Tuned
	5745	6	10.0	12.5	98.5	0.07	×1.02	12	**11.70**	-0.80	×1.20	**Tested**	12	**11.59**	-0.91	×1.23	**Tested**					Tuned
	5785	6	10.0	12.5	98.5	0.07	×1.02	12	11.47	-1.03	×1.27	**Tested**	12	11.01	-1.49	×1.41	**Tested**					Tuned
	5825	6	10.0	12.5	98.5	0.07	×1.02	12	10.92	-1.58	×1.44	**Tested**	12	10.76	-1.74	×1.49	**Tested**					Tuned
11n (HT20) (1Tx)	5180	MCS0	10.5	13.0	98.4	0.07	×1.02	12	12.09	-0.91	×1.23	-	12	**12.12**	-0.88	×1.22	-					Tuned
	5200	MCS0	10.5	13.0	98.4	0.07	×1.02	12	**12.18**	-0.82	×1.21	-	12	11.94	-1.06	×1.28	-					Tuned
	5220	MCS0	10.5	13.0	98.4	0.07	×1.02	12	12.13	-0.87	×1.22	-	12	11.95	-1.05	×1.27	-					Tuned
	5240	MCS0	10.5	13.0	98.4	0.07	×1.02	12	11.91	-1.09	×1.29	-	12	11.30	-1.70	×1.48	-					Tuned
	5260	MCS0	10.5	13.0	98.4	0.07	×1.02	12	**12.35**	-0.65	×1.16	-	13	11.40	-1.60	×1.45	-					Tuned
	5280	MCS0	10.5	13.0	98.4	0.07	×1.02	12	12.06	-0.94	×1.24	-	13	11.48	-1.52	×1.42	-					Tuned
	5300	MCS0	10.5	13.0	98.4	0.07	×1.02	12	11.95	-1.05	×1.27	-	13	11.28	-1.72	×1.49	-					Tuned
	5320	MCS0	10.5	13.0	98.4	0.07	×1.02	12	12.05	-0.95	×1.24	-	13	**11.71**	-1.29	×1.35	-					Tuned
	5500	MCS0	10.5	13.0	98.4	0.07	×1.02	12	12.21	-0.79	×1.20	**Tested**	12	11.54	-1.46	×1.40	-					Tuned
	5580	MCS0	10.5	13.0	98.4	0.07	×1.02	12	12.18	-0.82	×1.21	**Tested**	12	11.23	-1.77	×1.50	-					Tuned
	5600	MCS0	10.5	13.0	98.4	0.07	×1.02	12	**12.68**	-0.32	×1.08	**Tested**	12	**11.55**	-1.45	×1.40	-					Tuned
	5700	MCS0	10.5	13.0	98.4	0.07	×1.02	12	11.39	-1.61	×1.45	**Tested**	12	11.33	-1.67	×1.47	-					Tuned
	5745	MCS0	10.0	12.5	98.4	0.07	×1.02	12	**11.65**	-0.85	×1.22	-	12	**11.39**	-1.11	×1.29	-					Tuned
	5785	MCS0	10.0	12.5	98.4	0.07	×1.02	12	11.38	-1.12	×1.29	-	12	10.87	-1.63	×1.46	-					Tuned
	5825	MCS0	10.0	12.5	98.4	0.07	×1.02	12	10.68	-1.82	×1.52	-	12	10.64	-1.86	×1.53	-					Tuned
11n (HT40) (1Tx)	5190	MCS0	7.0	9.5	96.6	0.15	×1.04	8	8.93	-0.57	×1.14	-	9	8.16	-1.34	×1.36	-					Tuned
	5230	MCS0	10.5	13.0	96.6	0.15	×1.04	12	**12.28**	-0.72	×1.18	-	13	**12.09**	-0.91	×1.23	-					Tuned
	5270	MCS0	10.5	13.0	96.6	0.15	×1.04	12	**12.31**	-0.69	×1.17	**Tested**	13	**12.10**	-0.90	×1.23	**Tested**					Tuned
	5310	MCS0	8.0	10.5	96.6	0.15	×1.04	10	9.32	-1.18	×1.31	-	11	8.92	-1.58	×1.44	-					Tuned
	5510	MCS0	9.5	12.0	96.6	0.15	×1.04	11	10.75	-1.25	×1.33	**Tested**	11	11.07	-0.93	×1.24	**Tested**					Tuned
	5550	MCS0	10.5	13.0	96.6	0.15	×1.04	12	**12.69**	-0.31	×1.07	**Tested**	12	**12.22**	-0.78	×1.20	**Tested**					Tuned
	5590	MCS0	10.5	13.0	96.6	0.15	×1.04	12	12.62	-0.38	×1.09	**Tested**	12	11.33	-1.67	×1.47	**Tested**					Tuned
	5670	MCS0	10.5	13.0	96.6	0.15	×1.04	12	11.94	-1.06	×1.28	**Tested**	12	11.13	-1.87	×1.54	**Tested**					Tuned
	5755	MCS0	10.0	12.5	96.6	0.15	×1.04	12	**11.30**	-1.20	×1.32	**Tested**	12	**11.08**	-1.42	×1.39	**Tested**					Tuned
	5795	MCS0	10.0	12.5	96.6	0.15	×1.04	12	11.28	-1.22	×1.32	**Tested**	12	11.06	-1.44	×1.39	**Tested**					Tuned
11n (HT20) (2Tx)	5180	MCS0	10.5	13.0	96.8	0.14	×1.03	12	**12.35**	-0.65	×1.16	-	12	**11.95**	-1.05	×1.27	-	13.5	16.0	**15.17**	-0.83	Tuned
	5200	MCS0	10.5	13.0	96.8	0.14	×1.03	12	12.20	-0.80	×1.20	-	12	11.73	-1.27	×1.34	-	13.5	16.0	14.98	-1.02	Tuned
	5220	MCS0	10.5	13.0	96.8	0.14	×1.03	12	11.93	-1.07	×1.28	-	12	11.68	-1.32	×1.36	-	13.5	16.0	14.82	-1.18	Tuned
	5240	MCS0	10.5	13.0	96.8	0.14	×1.03	12	11.53	-1.47	×1.40	-	12	11.10	-1.90	×1.55	-	13.5	16.0	14.33	-1.67	Tuned
	5260	MCS0	10.5	13.0	96.8	0.14	×1.03	12	**12.77**	-0.23	×1.05	-	13	11.21	-1.79	×1.51	-	13.5	16.0	**15.07**	-0.93	Tuned
	5280	MCS0	10.5	13.0	96.8	0.14	×1.03	12	12.32	-0.68	×1.17	-	13	11.18	-1.82	×1.52	-	13.5	16.0	14.80	-1.20	Tuned
	5300	MCS0	10.5	13.0	96.8	0.14	×1.03	12	12.04	-0.96	×1.25	-	13	11.16	-1.84	×1.53	-	13.5	16.0	14.63	-1.37	Tuned
	5320	MCS0	10.5	13.0	96.8	0.14	×1.03	12	12.12	-0.88	×1.22	-	13	**11.66**	-1.34	×1.36	-	13.5	16.0	14.91	-1.09	Tuned
	5500	MCS0	10.5	13.0	96.8	0.14	×1.03	12	11.32	-1.68	×1.47	-	12	**11.61**	-1.39	×1.38	-	13.5	16.0	14.48	-1.52	Tuned
	5580	MCS0	10.5	13.0	96.8	0.14	×1.03	12	11.47	-1.53	×1.42	-	12	11.29	-1.71	×1.48	-	13.5	16.0	14.39	-1.61	Tuned
	5600	MCS0	10.5	13.0	96.8	0.14	×1.03	12	**12.08**	-0.92	×1.24	-	12	11.40	-1.60	×1.45	-	13.5	16.0	**14.76**	-1.24	Tuned
	5700	MCS0	10.5	13.0	96.8	0.14	×1.03	12	11.33	-1.67	×1.47	-	12	11.37	-1.63	×1.46	-	13.5	16.0	14.36	-1.64	Tuned
	5745	MCS0	10.0	12.5	96.8	0.14	×1.03	12	**11.22**	-1.28	×1.34	-	12	**11.60**	-0.90	×1.23	-	13.0	15.5	**14.42**	-1.08	Tuned
	5785	MCS0	10.0	12.5	96.8	0.14	×1.03	12	10.94	-1.56	×1.43	-	12	11.01	-1.49	×1.41	-	13.0	15.5	13.99	-1.51	Tuned
	5825	MCS0	10.0	12.5	96.8	0.14	×1.03	12	10.79	-1.71	×1.48	-	12	10.77	-1.73	×1.49	-	13.0	15.5	13.79	-1.71	Tuned

Mode	Freq.	Data rate	Power spec.		Duty cycle			Main antenna (chain #0) power					Sub antenna (chain #1) power					MIMO (Ant.0+1) power				
			Typical	Max.	duty cycle	factor	scaled factor	Set pwr.	Time average	Δ Max.	Tune-up factor	SAR Tested?	Set pwr.	Time average	Δ Max.	Tune-up factor	SAR Tested?	MIMO target	MIMO max.	SUM Ave.	Δ Max.	Power Tune -up?
	[MHz]	[Mbps]	[dBm]	[dBm]	[%]	[dB]	[-]	[dBm]	[dBm]	[dB]	[-]		[dBm]	[dBm]	[dB]	[-]		[dBm]	[dBm]	[dBm]	[dB]	
11n (HT40) (2Tx)	5190	MCS8	7.0	9.5	94.0	0.27	×1.06	8	9.27	-0.23	×1.05	-	8	7.79	-1.71	×1.48	-	10.0	12.5	11.60	-0.90	Tuned
	5230	MCS8	10.5	13.0	94.0	0.27	×1.06	12	**12.05**	-0.95	×1.24	-	12	**11.06**	-1.94	×1.56	-	13.5	16.0	**14.59**	-1.41	Tuned
	5270	MCS8	10.5	13.0	94.0	0.27	×1.06	13	**12.44**	-0.56	×1.14	-	13	**11.35**	-1.65	×1.46	-	13.5	16.0	**14.94**	-1.06	Tuned
	5310	MCS8	8.0	10.5	94.0	0.27	×1.06	10	9.92	-0.58	×1.14	-	10	8.72	-1.78	×1.51	-	11.0	13.5	12.37	-1.13	Tuned
	5510	MCS8	9.5	12.0	94.0	0.27	×1.06	11	10.39	-1.61	×1.45	-	11	11.12	-0.88	×1.22	-	12.5	15.0	13.78	-1.22	Tuned
	5550	MCS8	10.5	13.0	94.0	0.27	×1.06	12	**12.63**	-0.37	×1.09	-	12	**12.08**	-0.92	×1.24	-	13.5	16.0	**15.37**	-0.63	Tuned
	5590	MCS8	10.5	13.0	94.0	0.27	×1.06	12	12.12	-0.88	×1.22	-	12	11.34	-1.66	×1.47	-	13.5	16.0	14.76	-1.24	Tuned
	5670	MCS8	10.5	13.0	94.0	0.27	×1.06	12	11.42	-1.58	×1.44	-	12	11.12	-1.88	×1.54	-	13.5	16.0	14.28	-1.72	Tuned
	5755	MCS8	10.0	12.5	94.0	0.27	×1.06	12	10.92	-1.58	×1.44	-	12	**11.28**	-1.22	×1.32	-	13.0	15.5	**14.11**	-1.39	Tuned
	5795	MCS8	10.0	12.5	94.0	0.27	×1.06	12	**11.08**	-1.42	×1.39	-	12	10.99	-1.51	×1.42	-	13.0	15.5	14.04	-1.46	Tuned

*. Freq.: Frequency, Max.: Maximum, Power spec.: Power specification, Set pwr: Setting power for the measurement, Ave.: Average
*. Calculating formula: Time average power (dBm) = (P/M Reading, dBm)+(Cable loss, dB)+(Attenuator, dB)+(duty factor, dB)
Duty cycle: (duty cycle, %) = (Tx on time, ms) / (1 cycle time, ms) × 100; Duty factor: (duty factor, dBm) = 10 × log (100/(duty cycle, %))
Duty scaled factor: Duty cycle correction factor for obtained SAR value, Duty scaled factor [-] = 100(%) / (duty cycle, %)
ΔMax. (Deviation form maximum power, dB) = (results power (average, dBm)) - (Max.-specification output power (average, dBm))
Tune-up factor: Power tune-up factor for obtained SAR value, Tune-up factor [-] = 1 / (10 ^ ("Deviation from max., dB" / 10))
*. Date measured: July 19 and 20, 2016 / Measured by: Hiroshi Naka / Place: preparation room of No. 7 shielded room. (25 ±1 deg.C./50 ±10 %RH)
*. Uncertainty of antenna port conducted test; Power measurement uncertainty above 1GHz for this test was: (±) 0.76 dB(Average)/(±) 0.79 dB(Peak)
*. Uncertainty of antenna port conducted test; Duty cycle and time measurement: (±) 0.012 %.
*. Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test in following tables.
(Chart of the duty cycle for each operation mode refers to the EMC test report: 11253018S-A and 11253018S-B.)

Data rate vs Time average power (add duty factor) (dBm)																				
11b					11g					11n(HT20)(1Tx)					11n(HT20)(2Tx)				
2437MHz					2437MHz					2437MHz					2437MHz				
D/R	D/C	Typ /Set	Main	Sub	D/R	D/C	Typ /Set	Main	Sub	MCS	D/C	Typ /Set	Main	Sub	MCS	D/C	Typ /Set	Main	Sub
1	99.6	12.5 /13	**13.68**	**13.92**	6	97.4	12.5 /14	**14.30**	**14.56**	0	96.9	12.5 /14	**14.25**	**14.51**	0	94.3	12.5 /14	**14.18**	**14.42**
2	99.2	12.5 /13	*13.62*	*13.86*	9	96.2	12.5 /14	*14.10*	*14.54*	1	94.2	12.5 /14	*14.12*	*14.49*	1	89.3	12.5 /14	*14.11*	*14.41*
5.5	98.0	12.5 /13	*13.67*	*13.91*	12	95.0	12.5 /14	*14.21*	*14.55*	2	91.6	12.5 /14	*14.11*	*14.45*	2	85.4	12.5 /14	*14.13*	*14.41*
11	96.3	12.5 /13	*13.67*	*13.91*	18	92.6	12.5 /14	*14.18*	*14.54*	3	89.2	12.5 /14	*14.23*	*14.49*	3	82.0	12.5 /14	*14.14*	*14.38*
					24	90.5	12.5 /14	*14.29*	*14.51*	4	85.6	12.5 /14	*14.24*	*14.46*	4	76.5	12.5 /14	*14.17*	*14.41*
					36	86.7	12.5 /14	*14.29*	*14.51*	5	81.8	11.0 /12	*12.60*	*12.76*	5	72.6	11.0 /12	*12.60*	*12.86*
					48	83.0	11.0 /12	*12.67*	*12.81*	6	80.4	11.0 /12	*12.56*	*12.81*	6	70.7	11.0 /12	*12.53*	*12.87*
					56	81.7	11.0 /12	*12.56*	*12.76*	7	79.0	9.5 /10	*10.79*	*10.99*	7	69.9	9.5 /10	*10.51*	*11.07*

11a					11n(HT20) (1Tx)					11n(HT40) (1Tx)					11n(HT20) (2Tx)					11n(HT40) (2Tx)				
5500MHz					5500MHz					5550MHz					5500MHz					5550MHz				
D/R	D/C	Typ /Set	Main	Sub	MCS	D/C	Typ /Set	Main	Sub	MCS	D/C	Typ /Set	Main	Sub	MCS	D/C	Typ /Set	Main	Sub	MCS	D/C	Typ /Set	Main	Sub
6	98.5	10.5 /12	**12.46**	**11.80**	0	98.4	10.5 /12	**12.21**	**11.54**	0	96.6	10.5 /12	**12.69**	**12.22**	8	96.8	10.5 /12	**11.32**	**11.61**	8	94.0	10.5 /12	**12.63**	**12.08**
9	97.8	10.5 /12	*12.07*	*11.58*	1	96.8	10.5 /12	*12.10*	*11.48*	1	93.5	10.5 /12	12.56	12.00	9	94.0	10.5 /12	11.23	11.50	9	89.4	10.5 /12	11.95	12.04
12	97.0	10.5 /12	*12.03*	*11.52*	2	95.2	10.5 /12	*12.06*	*11.49*	2	91.2	10.5 /12	12.37	12.06	10	91.6	10.5 /12	11.28	11.59	10	85.5	10.5 /12	12.06	12.05
18	95.4	10.5 /12	*12.08*	*11.60*	3	93.6	10.5 /12	*12.20*	*11.50*	3	88.6	10.5 /12	12.42	11.80	11	89.4	10.5 /12	11.24	11.58	11	83.2	10.5 /12	11.96	11.93
24	94.4	10.5 /12	*12.11*	*11.68*	4	91.4	9.5 /11	*11.50*	*11.09*	4	85.2	10.0 /11	11.58	10.98	12	86.4	9.5 /11	10.79	10.89	12	78.0	10.0 /11	10.82	10.92
36	91.6	9.5 /10	*10.63*	*10.13*	5	88.8	9.0 /10	*10.78*	*9.84*	5	82.8	8.5 /10	10.58	10.06	13	83.1	9.0 /10	9.82	10.12	13	75.4	8.5 /10	10.21	10.09
48	89.0	8.5 /9	*9.88*	*9.09*	6	88.2	7.0 /8	*8.65*	*8.15*	6	81.1	7.0 /8	8.89	8.33	14	81.4	7.0 /8	8.15	8.35	14	74.4	7.0 /8	8.50	8.40
56	88.2	7.5 /8	*8.53*	*8.13*	7	87.3	6.0 /7	*7.38*	*7.55*	7	79.8	6.0 /7	7.78	7.38	15	80.7	6.0 /7	7.43	7.46	15	73.3	6.0 /7	7.73	7.41

*. D/R: Data Rate, D/C: Duty Cycle (%), Typ: Typical average power, Set: Power setting value on the control software, Main: Main antenna, Sub: Sub antenna..

SECTION 7: SAR Measurement results

Measurement date: July 25~29 and August 1~4, 2016 Measurement by: Hiroshi Naka

7.1 Liquid measurement

Target Frequency [MHz]	Liquid type	Liquid parameters (*a)								Temp. [deg.C.]	Depth [mm]	ΔSAR Coefficients(*b)		Date measured
		Permittivity (εr) [-]				Conductivity [S/m]						ΔSAR (1g) [%]	Correction required?	
		Target	Measured		Limit	Target	Measured		Limit					
			Meas.	Δεr [%]			Meas.	Δσ [%]						
2412	Head	***39.27***	38.38	-2.3	-5% ≤ εr-meas. ≤ 0%	***1.766***	1.816	+2.8	0% ≤ σ-meas. ≤ +5%	23.8	153	+1.90	not required.	July 25, 2016, before SAR test
2437		***39.22***	38.27	-2.4		***1.788***	1.839	+2.8				+1.91	not required.	
2462		***39.18***	38.15	-2.7		***1.813***	1.870	+3.1				+2.09	not required.	
2412	Body	***52.75***	51.04	-3.2	-5% ≤ εr-meas. ≤ 0%	***1.914***	1.927	+0.7	0% ≤ σ-meas. ≤ +5%	22.5	153	+1.08	not required.	July 26, 2016, before SAR test
2437		***52.72***	50.96	-3.3		***1.938***	1.949	+0.6				+1.04	not required.	
2462		***52.68***	50.79	-3.6		***1.967***	1.986	+1.0				+1.26	not required.	
5500	Body	***48.61***	47.06	-3.2	-5% ≤ εr-meas. ≤ 0%	***5.650***	5.767	+2.1	0% ≤ σ-meas. ≤ +5%	23.7	152	+0.55	not required.	July 27~28, 2016, before SAR test (It was within 24 hours from measurement on July 27 and same liquid temperature, so measured parameters of July 27 were used continuously.)
5510		***48.59***	46.98	-3.3		***5.661***	5.800	+2.5				+0.56	not required.	
5550		***48.54***	47.03	-3.1		***5.708***	5.872	+2.9				+0.50	not required.	
5580		***48.50***	46.99	-3.1		***5.743***	5.857	+2.0				+0.53	not required.	
5590		***48.49***	47.03	-3.0		***5.755***	5.907	+2.6				+0.48	not required.	
5600		***48.47***	46.98	-3.1		***5.766***	5.904	+2.4				+0.51	not required.	
5670		***48.38***	46.79	-3.3		***5.848***	6.027	+3.1				+0.51	not required.	
5700		***48.34***	46.86	-3.1		***5.883***	6.035	+2.6				+0.49	not required.	
5745	Body	***48.27***	46.59	-3.5	-5% ≤ εr-meas. ≤ 0%	***5.936***	6.077	+2.4	0% ≤ σ-meas. ≤ +5%	23.7	152	+0.59	not required.	July 28, 2016, before SAR test
5755		***48.26***	46.54	-3.6		***5.947***	6.133	+3.1				+0.57	not required.	
5785		***48.22***	46.51	-3.5		***5.982***	6.122	+2.3				+0.60	not required.	
5795		***48.21***	46.61	-3.3		***5.994***	6.172	+3.0				+0.53	not required.	
5825		***48.17***	46.62	-3.2		***6.029***	6.201	+2.9				+0.51	not required.	
5260	Body	***48.93***	47.28	-3.4	-5% ≤ εr-meas. ≤ 0%	***5.369***	5.416	+0.9	0% ≤ σ-meas. ≤ +5%	23.7	152	+0.65	not required.	July 29, 2016, before SAR test
5270		***48.92***	47.29	-3.3		***5.381***	5.461	+1.5				+0.62	not required.	
5300		***48.88***	47.27	-3.3		***5.416***	5.532	+2.1				+0.59	not required.	
5310		***48.87***	47.25	-3.3		***5.428***	5.515	+1.6				+0.61	not required.	
5320		***48.85***	47.23	-3.3		***5.439***	5.506	+1.2				+0.63	not required.	
5260	Head	***35.92***	36.07	+0.4	-5% ≤ εr-meas. ≤ +5%	***4.717***	4.501	-4.6	-5% ≤ σ-meas. ≤ +5%	22.8	153	+0.05	not required.	August 1~2, 2016, before SAR test (It was within 24 hours from measurement on August 1 and same liquid temperature, so measured parameters of August 1 were used continuously.)
5270		***35.91***	36.05	+0.4		***4.727***	4.504	-4.7				+0.06	not required.	
5300		***35.87***	35.90	+0.1		***4.758***	4.544	-4.5				+0.13	not required.	
5310		***35.86***	35.91	+0.2		***4.768***	4.553	-4.5				+0.10	not required.	
5320		***35.85***	35.93	+0.2		***4.778***	4.568	-4.4				+0.10	not required.	
5500	Head	***35.64***	35.74	+0.3	-5% ≤ εr-meas. ≤ +5%	***4.963***	4.740	-4.5	-5% ≤ σ-meas. ≤ +5%	22.8	153	+0.13	not required.	August 2~3, 2016, before SAR test (It was within 24 hours from measurement on August 2 and same liquid temperature, so measured parameters of August 2 were used continuously.)
5510		***35.63***	35.62	+0.1		***4.973***	4.768	-4.1				+0.18	not required.	
5550		***35.59***	35.59	0		***5.014***	4.802	-4.2				+0.18	not required.	
5580		***35.55***	35.62	+0.2		***5.045***	4.830	-4.3				+0.15	not required.	
5590		***35.54***	35.53	0		***5.055***	4.849	-4.1				+0.18	not required.	
5600		***35.53***	35.67	+0.4		***5.065***	4.832	-4.6				+0.12	not required.	
5670		***35.45***	35.52	+0.2		***5.137***	4.916	-4.3				+0.15	not required.	
5700		***35.41***	35.35	+0.2		***5.168***	4.957	-4.1				+0.22	not required.	
5745	Head	***35.36***	35.44	+0.2	-5% ≤ εr-meas. ≤ +5%	***5.214***	5.020	-3.7	-5% ≤ σ-meas. ≤ +5%	22.9	149	+0.12	not required.	August 4, 2016, before SAR test
5755		***35.35***	35.37	0		***5.224***	5.018	-3.9				+0.17	not required.	
5785		***35.32***	35.32	0		***5.255***	5.020	-4.5				+0.20	not required.	
5795		***35.31***	35.32	+0.1		***5.265***	5.038	-4.3				+0.18	not required.	
5825		***35.27***	35.30	+0.1		***5.296***	5.084	-4.0				+0.16	not required.	

a. The target value is a parameter defined in Appendix A of KDB865664 D01 (v01r04), the dielectric parameters suggested for head and body tissue simulating liquid are given at 2000, 2450, 3000 and 5800MHz. (.The parameters of the head liquid are the same value as IEC 62209-2.) Parameters for the frequencies between 2000-3000, 3000-5800MHz were obtained using linear interpolation. Above 5800MHz were obtained using linear extrapolation.

*b. Calculating formula: $\Delta SAR(1g) = C\varepsilon r \times \Delta\varepsilon r + C\sigma \times \Delta\sigma$, $C\varepsilon r = -7.854E\text{-}4 \times f^3 + 9.402E\text{-}3 \times f^2 - 2.742E\text{-}2 \times f - 0.2026$ / $C\sigma = 9.804E\text{-}3 \times f^3 - 8.661E\text{-}2 \times f^2 + 2.981E\text{-}2 \times f + 0.7829$

7.2 SAR measurement results (2.4GHz band, Body/Head)

[Measured and Reported (Scaled) SAR results]

SAR measurement results											Reported SAR [W/kg]						
Mode	Freq. [MHz] (Channel)	Data rate [Mbps]	EUT setup: Antenna *.SAR measured	EUT setup: Position	EUT setup: Gap [mm]	EUT setup: Bty. ID	SAR [W/kg] Max. value of multi-peak: Meas.	ΔSAR [%]	ΔSAR corrected	SAR plot # in Appendix 2-2	Duty cycle correction: Duty [%]	Duty cycle correction: Duty scaled	Output average power correction: Meas. [dBm].	Output average power correction: Max. [dBm]	Output average power correction: Tune-up factor	SAR Corrected (Scaled) (*b)	Remarks
Step 1: 2.4GHz Band (Body)																	
11b	2412(1)	1	Main(0)	L.side -main	0	-	**0.231**	+1.08	n/a (*a)	**Plot 1-1**	99.6	×1.00	14.19	15.0	×1.21	**0.280**	main-worst,body,2.4GHz
	2437(6)				0	-	**0.172**	+1.04	n/a (*a)	Plot 1-3	99.6	×1.00	13.68	15.0	×1.36	**0.234**	-
	2462(11)				0	-	**0.158**	+1.26	n/a (*a)	Plot 1-4	99.6	×1.00	13.59	15.0	×1.38	**0.218**	-
	2412(1)		Sub(1)	S.side -sub	0	-	**0.208**	+1.08	n/a (*a)	**Plot 1-2**	99.6	×1.00	14.28	15.0	×1.18	**0.245**	sub-worst,body,2.4GHz
	2437(6)				0	-	**0.145**	+1.04	n/a (*a)	Plot 1-5	99.6	×1.00	13.92	15.0	×1.28	**0.186**	-
	2462(11)				0	-	**0.125**	+1.26	n/a (*a)	Plot 1-6	99.6	×1.00	13.48	15.0	×1.42	**0.178**	-
	2412(1)		Main(0)	Front (Patient)	0	-	**0.038**	+1.08	n/a (*a)	Plot 1-7	99.6	×1.00	14.19	15.0	×1.21	**0.046**	-
			Sub(1)		0	-	**0.024**	+1.08	n/a (*a)	Plot 1-8	99.6	×1.00	14.28	15.0	×1.18	**0.028**	-
			Main(0)	Back	0	-	**0.041**	+1.08	n/a (*a)	Plot 1-9	99.6	×1.00	14.19	15.0	×1.21	**0.050**	-
			Sub(1)		0	-	**0.037**	+1.08	n/a (*a)	Plot 1-10	99.6	×1.00	14.28	15.0	×1.18	**0.044**	-
Step 2: 2.4GHz Band (Head)																	
11b	2412(1)	1	Main(0)	L.side -main	0	-	**0.240**	+1.90	n/a (*a)	**Plot 2-1**	99.6	×1.00	14.19	15.0	×1.21	**0.290**	main-worst,head,2.4GHz
	2437(6)				0	-	**0.178**	+1.91	n/a (*a)	Plot 2-3	99.6	×1.00	13.68	15.0	×1.36	**0.242**	-
	2462(11)				0	-	**0.163**	+2.09	n/a (*a)	Plot 2-4	99.6	×1.00	13.59	15.0	×1.38	**0.225**	-
	2412(1)		Sub(1)	S.side -sub	0	-	**0.221**	+1.90	n/a (*a)	**Plot 2-2**	99.6	×1.00	14.28	15.0	×1.18	**0.261**	sub-worst,head,2.4GHz
	2437(6)				0	-	**0.167**	+1.91	n/a (*a)	Plot 2-5	99.6	×1.00	13.92	15.0	×1.28	**0.214**	-
	2462(11)				0	-	**0.149**	+2.09	n/a (*a)	Plot 2-6	99.6	×1.00	13.48	15.0	×1.42	**0.212**	-
	2412(1)		Main(0)	Front (Patient)	0	-	**0.032**	+1.90	n/a (*a)	Plot 2-7	99.6	×1.00	14.19	15.0	×1.21	**0.039**	-
			Sub(1)		0	-	**0.018**	+1.90	n/a (*a)	Plot 2-8	99.6	×1.00	14.28	15.0	×1.18	**0.021**	-
			Main(0)	Back	0	-	**0.026**	+1.90	n/a (*a)	Plot 2-9	99.6	×1.00	14.19	15.0	×1.21	**0.031**	-
			Sub(1)		0	-	**0.017**	+1.90	n/a (*a)	Plot 2-10	99.6	×1.00	14.28	15.0	×1.18	**0.020**	-

*. SAR test of OFDM mode was reduced, because the estimate reported SAR of OFDM mode was ≤ 1.2 W/kg by using the highest reported SAR of DSSS mode.

OFDM mode	Maximum tune-up tolerance limit: DSSS [dBm]	DSSS [mW] (a)	OFDM [dBm]	OFDM [mW] (b)	OFDM scaled factor [-] (b)/(a)×100	DSSS reported SAR(1g) value: Ant.Main Setup	Ant.Main [W/kg]	Ant.Sub Setup	Ant.Sub [W/kg]	Estimated SAR(1g) value: OFDM [W/kg] Ant.Main	Ant.Sub	Exclusion limit [W/kg]	Standalone SAR test require?	SAR type
11g	15.0	31.62	15.0	31.62	1.00	Side-main	0.280	Side-sub	0.245	**0.280**	**0.245**	≤1.2	**No**	**Body**
n(20HT)	15.0	31.62	15.0	31.62	1.00	Side-main	0.280	Side-sub	0.245	**0.280**	**0.245**	≤1.2	**No**	
11g	15.0	31.62	15.0	31.62	1.00	Side-main	0.290	Side-sub	0.261	**0.290**	**0.261**	≤1.2	**No**	**Head**
n(20HT)	15.0	31.62	15.0	31.62	1.00	Side-main	0.290	Side-sub	0.261	**0.290**	**0.261**	≤1.2	**No**	

Notes:

*. Gap: It is the separation distance between the platform outer surface and the bottom outer surface of phantom; Freq.: Frequency; Max.: Maximum; Meas.: Measured value; n/a: not applied.

*. Calibration frequency of the SAR measurement probe (and used conversion factors)

Liquid	SAR test frequency	Probe calibration frequency	Validity	Conversion factor	Uncertainty
Body	2412, 2437, 2462 MHz	2450 MHz	within ±50MHz of calibration frequency	7.16	±12.0%
Head	2412, 2437, 2462 MHz	2450 MHz	within ±50MHz of calibration frequency	7.22	±12.0%

*. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

*a. Since the calculated ΔSAR values of the tested liquid had shown positive correction, the measured SAR was not converted by ΔSAR correction.
Calculating formula: ΔSAR corrected SAR (W/kg) = (Meas. SAR (W/kg)) × (100 - (ΔSAR(%)) / 100

*b. Calculating formula: Reported SAR (W/kg) = (Measured SAR (W/kg)) × (Duty scaled) × (Tune-up factor)
Duty scaled = Duty scaled factor: Duty cycle correction factor for obtained SAR value, Duty scaled factor [-] = 100(%) / (duty cycle, %)
Tune-up factor: Power tune-up factor for obtained SAR value, Tune-up factor [-] = 1 / (10 ^ ("Deviation from max., dB" / 10))

(Clause 5.2, 2.4GHz SAR Procedures for 2.4GHz band DSSS and OFDM, in KDB248227 D01 (v02r02))

5.2.1 802.11b DSSS SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

1) When the reported SAR of the highest measured maximum output power channel (section 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
2) 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.

5.2.2 2.4 GHz 802.11g/n OFDM SAR Test Exclusion Requirements

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3, including sub-sections). SAR is not required for the following 2.4 GHz OFDM conditions.

1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
2) 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.

7.3 SAR measurement results (5GHz band, Body/Head)

[Measured and Reported (Scaled) SAR results]

SAR measurement results												Reported SAR [W/kg]						
Mode	Freq. [MHz] (Channel)	Data rate [Mbps]	EUT setup: Antenna *.SAR measured	EUT setup: Position	EUT setup: Gap [mm]	EUT setup: Bty. ID	SAR [W/kg] Max. value of multi-peak: Meas.	ΔSAR [%]	ΔSAR corrected	SAR plot # in Appendix 2-2	Duty cycle correction: Duty [%]	Duty cycle correction: Duty scaled	Output average power correction: Meas. [dBm].	Output average power correction: Max. [dBm]	Output average power correction: Tune-up factor	SAR Corrected (Scaled) (*b)	Remarks
Step 3: W52/53 Band (Body)																	
11n (40HT)	5270(54)	MCS0	Main(0)	Front (Patient)	0	-	0.030	+0.62	n/a (*a)	Plot 3-3	96.6	×1.04	12.31	13.0	×1.17	0.037	-
			Sub(1)		0	-	0.0044	+0.62	n/a (*a)	Plot 3-4	96.6	×1.04	12.10	13.0	×1.23	0.006	-
			Main(0)	Back	0	-	0.081	+0.62	n/a (*a)	Plot 3-5	96.6	×1.04	12.31	13.0	×1.17	0.099	-
			Sub(1)		0	-	0.011	+0.62	n/a (*a)	Plot 3-6	96.6	×1.04	12.10	13.0	×1.23	0.014	-
	5270(54)		Main(0)	L.side -main	0	-	0.891	+0.62	n/a (*a)	Plot 3-7	96.6	×1.04	12.31	13.0	×1.17	1.084	-
	5310(62)				0	-	*Reduced*	+0.61	n/a (*a)	-	96.6	×1.04	9.32	10.5	×1.31	n/a	*. lower power
	5270(54)		Sub(1)	S.side -sub	0	-	0.219	+0.62	n/a (*a)	Plot 3-8	96.6	×1.04	12.10	13.0	×1.23	0.280	-
	5310(62)				0	-	*Reduced*	+0.51	n/a (*a)	-	96.6	×1.04	8.92	10.5	×1.44	n/a	*. lower power
11a	5260(52)	6	Main(0)	L.side -main	0	-	1.03	+0.65	n/a (*a)	**Plot 3-1**	98.5	×1.02	12.57	13.0	×1.10	1.156	main-worst,body,w52/53
	5300(60)				0	-	0.865	+0.59	n/a (*a)	Plot 3-9	98.5	×1.02	12.14	13.0	×1.22	1.076	-
	5320(64)				0	-	0.907	+0.63	n/a (*a)	Plot 3-10	98.5	×1.02	12.35	13.0	×1.16	1.073	-
	5260(52)		Sub(1)	S.side -sub	0	-	0.320	+0.65	n/a (*a)	**Plot 3-2**	98.5	×1.02	11.61	13.0	×1.38	0.450	sub-worst,body,w52/53
	5300(60)				0	-	0.251	+0.59	n/a (*a)	Plot 3-11	98.5	×1.02	11.54	13.0	×1.40	0.358	-
	5320(64)				0	-	0.299	+0.63	n/a (*a)	Plot 3-12	98.5	×1.02	11.78	13.0	×1.32	0.403	-
Step 4: W56 Band (Body)																	
11n (40HT)	5550(110)	MCS0	Main(0)	Front (Patient)	0	-	0.00818	+0.50	n/a (*a)	Plot 4-3	96.6	×1.04	12.69	13.0	×1.07	0.009	-
			Sub(1)		0	-	0.020	+0.50	n/a (*a)	Plot 4-4	96.6	×1.04	12.22	13.0	×1.20	0.025	-
			Main(0)	Back	0	-	0.049	+0.50	n/a (*a)	Plot 4-5	96.6	×1.04	12.69	13.0	×1.07	0.055	-
			Sub(1)		0	-	0.061	+0.50	n/a (*a)	Plot 4-6	96.6	×1.04	12.22	13.0	×1.20	0.076	-
	5550(110)		Main(0)	L.side -main	0	-	0.695	+0.50	n/a (*a)	Plot 4-7	96.6	×1.04	12.69	13.0	×1.07	0.773	-
	5590(118)				0	-	0.782	+0.48	n/a (*a)	Plot 4-8	96.6	×1.04	12.62	13.0	×1.09	0.886	-
	5670(134)				0	-	0.912	+0.51	n/a (*a)	Plot 4-9	96.6	×1.04	11.94	13.0	×1.28	1.214	-
	5510(102)				0	-	0.367	+0.56	n/a (*a)	Plot 4-10	96.6	×1.04	10.75	12.0	×1.33	0.508	-
	5550(110)		Sub(1)	S.side -sub	0	-	0.454	+0.50	n/a (*a)	Plot 4-11	96.6	×1.04	12.22	13.0	×1.20	0.567	-
	5590(118)				0	-	0.302	+0.48	n/a (*a)	Plot 4-12	96.6	×1.04	11.33	13.0	×1.47	0.462	-
	5670(134)				0	-	0.283	+0.51	n/a (*a)	Plot 4-13	96.6	×1.04	11.13	13.0	×1.54	0.453	-
	5510(102)				0	-	0.319	+0.56	n/a (*a)	Plot 4-14	96.6	×1.04	11.07	12.0	×1.24	0.411	-
11a	5600(120)	6	Main(0)	L.side -main	0	-	0.792	+0.51	n/a (*a)	Plot 4-15	98.5	×1.02	12.82	13.0	×1.04	0.840	-
	5500(100)				0	-	0.610	+0.55	n/a (*a)	Plot 4-16	98.5	×1.02	12.46	13.0	×1.13	0.703	-
	5700(140)				0	-	0.935	+0.49	n/a (*a)	Plot 4-17	98.5	×1.02	11.82	13.0	×1.18	1.249	-
	5580(116)				0	-	0.667	+0.53	n/a (*a)	Plot 4-18	98.5	×1.02	12.06	13.0	×1.24	0.844	-
	5500(100)		Sub(1)	S.side -sub	0	-	0.413	+0.55	n/a (*a)	Plot 4-19	98.5	×1.02	11.80	13.0	×1.32	0.556	-
	5580(116)				0	-	0.324	+0.53	n/a (*a)	Plot 4-20	98.5	×1.02	11.33	13.0	×1.47	0.486	-
	5700(140)				0	-	0.404	+0.49	n/a (*a)	**Plot 4-2**	98.5	×1.02	11.50	13.0	×1.41	0.581	ant#1-worst,body,w56
11n (20HT)	5600(120)	MCS0	Main(0)	L.side -main	0	-	0.771	+0.51	n/a (*a)	Plot 4-21	98.4	×1.02	12.68	13.0	×1.08	0.849	-
	5500(100)				0	-	0.634	+0.55	n/a (*a)	Plot 4-22	98.4	×1.02	12.21	13.0	×1.20	0.776	-
	5700(140)				0	-	0.891	+0.49	n/a (*a)	**Plot 4-1**	98.4	×1.02	11.39	13.0	×1.45	1.318	ant#0-worst,body,w56
	5580(116)				0	-	0.663	+0.53	n/a (*a)	Plot 4-23	98.4	×1.02	12.18	13.0	×1.21	0.818	-
Step 5: W58 Band (Body)																	
11n (40HT)	5755(151)	MCS0	Main(0)	Front (Patient)	0	-	0.0131	+0.57	n/a (*a)	Plot 5-3	96.6	×1.04	11.30	12.0	×1.32	0.018	-
			Sub(1)		0	-	0.00558	+0.57	n/a (*a)	Plot 5-4	96.6	×1.04	11.08	12.0	×1.39	0.008	-
			Main(0)	Back	0	-	0.047	+0.57	n/a (*a)	Plot 5-5	96.6	×1.04	11.30	12.0	×1.32	0.065	-
			Sub(1)		0	-	0.024	+0.57	n/a (*a)	Plot 5-6	96.6	×1.04	11.08	12.0	×1.39	0.035	-
	5755(151)		Main(0)	L.side -main	0	-	0.659	+0.57	n/a (*a)	**Plot 5-1**	96.6	×1.04	11.30	12.0	×1.32	0.905	ant#0-worst,body,w58
	5795(159)				0	-	0.595	+0.53	n/a (*a)	Plot 5-7	96.6	×1.04	11.28	12.0	×1.32	0.817	-
	5755(151)		Sub(1)	S.side -sub	0	-	0.203	+0.57	n/a (*a)	Plot 5-8	96.6	×1.04	11.08	12.0	×1.39	0.293	-
	5795(159)				0	-	0.148	+0.53	n/a (*a)	Plot 5-9	96.6	×1.04	11.06	12.0	×1.39	0.214	-
11a	5745(149)	6	Main(0)	L.side -main	0	-	0.730	+0.59	n/a (*a)	Plot 5-10	98.5	×1.02	11.70	12.0	×1.20	0.894	-
	5785(157)				0	-	0.640	+0.60	n/a (*a)	Plot 5-11	98.5	×1.02	11.47	12.0	×1.27	0.829	-
	5825(165)				0	-	0.525	+0.51	n/a (*a)	Plot 5-12	98.5	×1.02	10.92	12.0	×1.44	0.771	-
	5745(149)		Sub(1)	S.side -sub	0	-	0.246	+0.59	n/a (*a)	**Plot 5-2**	98.5	×1.02	11.59	12.0	×1.23	0.309	ant#1-worst,body,w58
	5785(157)				0	-	0.183	+0.60	n/a (*a)	Plot 5-13	98.5	×1.02	11.01	12.0	×1.41	0.263	-
	5825(165)				0	-	0.197	+0.51	n/a (*a)	Plot 5-14	98.5	×1.02	10.76	12.0	×1.49	0.299	-

(cont'd)

7.3 SAR measurement results (5GHz band, Body/Head)
(cont'd)
[Measured and Reported (Scaled) SAR results] *(cont'd)*

SAR measurement results											Reported SAR [W/kg]							
Mode	Freq. [MHz] (Channel)	Data rate [Mbps]	EUT setup: Antenna *:SAR measured.	EUT setup: Position	EUT setup: Gap [mm]	EUT setup: Bty. ID	SAR [W/kg] Max. value of multi-peak: Meas.	ΔSAR [%]	ΔSAR corrected	SAR plot # in Appendix 2-2	Duty cycle correction: Duty [%]	Duty cycle correction: Duty scaled	Output average power correction: Meas. [dBm].	Output average power correction: Max. [dBm]	Output average power correction: Tune-up factor	SAR Corrected (Scaled) (*b)	Remarks
Step 6: W52/53 Band (Head)																	
11n (40HT)	5270(54)	MCS0	Main(0)	Front (Patient)	0	-	**0.058**	+0.06	n/a (*a)	Plot 6-3	96.6	×1.04	12.31	13.0	×1.17	**0.071**	-
			Sub(1)		0	-	**0.011**	+0.06	n/a (*a)	Plot 6-4	96.6	×1.04	12.10	13.0	×1.23	**0.014**	-
			Main(0)	Back	0	-	**0.084**	+0.06	n/a (*a)	Plot 6-5	96.6	×1.04	12.31	13.0	×1.17	**0.102**	-
			Sub(1)		0	-	**0.026**	+0.06	n/a (*a)	Plot 6-6	96.6	×1.04	12.10	13.0	×1.23	**0.033**	-
	5270(54)		Main(0)	L.side -main	0	-	**0.863**	+0.06	n/a (*a)	Plot 6-7	96.6	×1.04	12.31	13.0	×1.17	**1.050**	-
	5310(62)				0	-	*Reduced*	+0.10	n/a (*a)	-	96.6	×1.04	9.32	10.5	×1.31	**n/a**	*. lower power
	5270(54)		Sub(1)	S.side -sub	0	-	**0.243**	+0.06	n/a (*a)	Plot 6-8	96.6	×1.04	12.10	13.0	×1.23	**0.311**	-
	5310(62)				0	-	*Reduced*	+0.10	n/a (*a)	-	96.6	×1.04	8.92	10.5	×1.44	**n/a**	*. lower power
11a	5260(52)	6	Main(0)	L.side -main	0	-	**1.04**	+0.05	n/a (*a)	**Plot 6-1**	98.5	×1.02	12.57	13.0	×1.10	**1.167**	main-worst,head,w52/53
	5300(60)				0	-	**0.884**	+0.13	n/a (*a)	Plot 6-9	98.5	×1.02	12.14	13.0	×1.22	**1.100**	-
	5320(64)				0	-	**0.949**	+0.10	n/a (*a)	Plot 6-10	98.5	×1.02	12.35	13.0	×1.16	**1.123**	-
	5260(52)		Sub(1)	S.side -sub	0	-	**0.334**	+0.05	n/a (*a)	**Plot 6-2**	98.5	×1.02	11.61	13.0	×1.38	**0.470**	sub-worst,head,w52/53
	5300(60)				0	-	**0.269**	+0.13	n/a (*a)	Plot 6-11	98.5	×1.02	11.54	13.0	×1.40	**0.384**	-
	5320(64)				0	-	**0.307**	+0.10	n/a (*a)	Plot 6-12	98.5	×1.02	11.78	13.0	×1.32	**0.413**	-
Step 7: W56 Band (Head)																	
11n (40HT)	5550(110)	MCS0	Main(0)	Front (Patient)	0	-	**0.028**	+0.18	n/a (*a)	Plot 7-3	96.6	×1.04	12.69	13.0	×1.07	**0.031**	-
			Sub(1)		0	-	**0.033**	+0.18	n/a (*a)	Plot 7-4	96.6	×1.04	12.22	13.0	×1.20	**0.041**	-
			Main(0)	Back	0	-	**0.054**	+0.18	n/a (*a)	Plot 7-5	96.6	×1.04	12.69	13.0	×1.07	**0.060**	-
			Sub(1)		0	-	**0.077**	+0.18	n/a (*a)	Plot 7-6	96.6	×1.04	12.22	13.0	×1.20	**0.096**	-
	5550(110)		Main(0)	L.side -main	0	-	**0.662**	+0.18	n/a (*a)	Plot 7-7	96.6	×1.04	12.69	13.0	×1.07	**0.737**	-
	5590(118)				0	-	**0.754**	+0.18	n/a (*a)	Plot 7-8	96.6	×1.04	12.62	13.0	×1.09	**0.855**	-
	5670(134)				0	-	**0.885**	+0.15	n/a (*a)	Plot 7-9	96.6	×1.04	11.94	13.0	×1.28	**1.178**	-
	5510(102)				0	-	**0.368**	+0.18	n/a (*a)	Plot 7-10	96.6	×1.04	10.75	12.0	×1.33	**0.509**	-
	5550(110)		Sub(1)	S.side -sub	0	-	**0.447**	+0.18	n/a (*a)	**Plot 7-2**	96.6	×1.04	12.22	13.0	×1.20	**0.558**	sub-worst,head,w56
	5590(118)				0	-	**0.291**	+0.18	n/a (*a)	Plot 7-11	96.6	×1.04	11.33	13.0	×1.47	**0.445**	-
	5670(134)				0	-	**0.329**	+0.15	n/a (*a)	Plot 7-12	96.6	×1.04	11.13	13.0	×1.54	**0.527**	-
	5510(102)				0	-	**0.300**	+0.18	n/a (*a)	Plot 7-13	96.6	×1.04	11.07	12.0	×1.24	**0.387**	-
11a	5600(120)	6	Main(0)	L.side -main	0	-	**0.777**	+0.12	n/a (*a)	Plot 7-14	98.5	×1.02	12.82	13.0	×1.04	**0.824**	-
	5500(100)				0	-	**0.625**	+0.13	n/a (*a)	Plot 7-15	98.5	×1.02	12.46	13.0	×1.13	**0.720**	-
	5700(140)				0	-	**0.919**	+0.22	n/a (*a)	Plot 7-16	98.5	×1.02	11.82	13.0	×1.31	**1.228**	-
	5580(116)				0	-	**0.641**	+0.15	n/a (*a)	Plot 7-17	98.5	×1.02	12.06	13.0	×1.24	**0.811**	-
	5500(100)		Sub(1)	S.side -sub	0	-	**0.362**	+0.13	n/a (*a)	Plot 7-18	98.5	×1.02	11.80	13.0	×1.32	**0.487**	-
	5580(116)				0	-	**0.320**	+0.15	n/a (*a)	Plot 7-19	98.5	×1.02	11.33	13.0	×1.47	**0.480**	-
	5700(140)				0	-	**0.369**	+0.22	n/a (*a)	Plot 7-20	98.5	×1.02	11.50	13.0	×1.41	**0.531**	-
11n (20HT)	5600(120)	MCS0	Main(0)	L.side -main	0	-	**0.746**	+0.12	n/a (*a)	Plot 7-21	98.4	×1.02	12.68	13.0	×1.08	**0.822**	-
	5500(100)				0	-	**0.599**	+0.13	n/a (*a)	Plot 7-22	98.4	×1.02	12.21	13.0	×1.20	**0.733**	-
	5700(140)				0	-	**0.885**	+0.22	n/a (*a)	**Plot 7-1**	98.4	×1.02	11.39	13.0	×1.45	**1.309**	main-worst,head,w56
	5580(116)				0	-	**0.623**	+0.15	n/a (*a)	Plot 7-23	98.4	×1.02	12.18	13.0	×1.21	**0.769**	-
Step 8: W58 Band (Head)																	
11n (40HT)	5755(151)	MCS0	Main(0)	Front (Patient)	0	-	**0.026**	+0.17	n/a (*a)	Plot 8-3	96.6	×1.04	11.30	12.0	×1.32	**0.036**	-
			Sub(1)		0	-	**0.012**	+0.17	n/a (*a)	Plot 8-4	96.6	×1.04	11.08	12.0	×1.39	**0.017**	-
			Main(0)	Back	0	-	**0.056**	+0.17	n/a (*a)	Plot 8-5	96.6	×1.04	11.30	12.0	×1.32	**0.077**	-
			Sub(1)		0	-	**0.021**	+0.17	n/a (*a)	Plot 8-6	96.6	×1.04	11.08	12.0	×1.39	**0.030**	-
	5755(151)		Main(0)	L.side -main	0	-	**0.702**	+0.17	n/a (*a)	Plot 8-7	96.6	×1.04	11.30	12.0	×1.32	**0.964**	-
	5795(159)				0	-	**0.629**	+0.18	n/a (*a)	Plot 8-8	96.6	×1.04	11.28	12.0	×1.32	**0.863**	-
	5755(151)		Sub(1)	S.side -sub	0	-	**0.238**	+0.17	n/a (*a)	Plot 8-9	96.6	×1.04	11.08	12.0	×1.39	**0.344**	-
	5795(159)				0	-	**0.184**	+0.18	n/a (*a)	Plot 8-10	96.6	×1.04	11.06	12.0	×1.39	**0.266**	-
11a	5745(149)	6	Main(0)	L.side -main	0	-	**0.813**	+0.12	n/a (*a)	**Plot 8-1**	98.5	×1.02	11.70	12.0	×1.20	**0.995**	main-worst,head,w58
	5785(157)				0	-	**0.692**	+0.20	n/a (*a)	Plot 8-11	98.5	×1.02	11.47	12.0	×1.27	**0.896**	-
	5825(165)				0	-	**0.542**	+0.16	n/a (*a)	Plot 8-12	98.5	×1.02	10.92	12.0	×1.44	**0.796**	-
	5745(149)		Sub(1)	S.side -sub	0	-	**0.291**	+0.12	n/a (*a)	**Plot 8-2**	98.5	×1.02	11.59	12.0	×1.23	**0.365**	sub-worst,head,w58
	5785(157)				0	-	**0.214**	+0.20	n/a (*a)	Plot 8-13	98.5	×1.02	11.01	12.0	×1.41	**0.308**	-
	5825(165)				0	-	**0.227**	+0.16	n/a (*a)	Plot 8-14	98.5	×1.02	10.76	12.0	×1.49	**0.345**	-

7.3 SAR measurement results (5GHz band, Body/Head) (cont'd)

Notes:
*. Gap: It is the separation distance between the platform outer surface and the bottom outer surface of phantom; Freq.: Frequency; Max.: Maximum; Meas.: Measured value; n/a: not applied.
*. Calibration frequency of the SAR measurement probe (and used conversion factors)

Liquid	SAR test frequency	Probe calibration frequency	Validity	Conversion factor	Uncertainty
Body	5260, 5270, 5300, 5320 MHz	5250 MHz	within ±110 MHz of calibration frequency	4.37	±13.1 %
	5500, 5510, 5550, 5580, 5590, 5600, 5670, 5700 MHz	5600 MHz	within ±110 MHz of calibration frequency	3.65	±13.1 %
	5745, 5755, 5785, 5795, 5825 MHz	5750 MHz	within ±110 MHz of calibration frequency	3.96	±13.1 %
Head	5260, 5270, 5300, 5320 MHz	5250 MHz	within ±110 MHz of calibration frequency	4.94	±13.1 %
	5500, 5510, 5550, 5580, 5590, 5600, 5670, 5700 MHz	5600 MHz	within ±110 MHz of calibration frequency	4.33	±13.1 %
	5745, 5755, 5785, 5795, 5825 MHz	5800 MHz	within ±110 MHz of calibration frequency	4.30	±13.1 %

*. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

*a. Since the calculated ΔSAR values of the tested liquid had shown positive correction, the measured SAR was not converted by ΔSAR correction.
Calculating formula: ΔSAR corrected SAR (W/kg) = (Meas. SAR (W/kg)) × (100 - (ΔSAR(%)) / 100
*b. Calculating formula: Reported SAR (W/kg) = (Measured SAR (W/kg)) × (Duty scaled) × (Tune-up factor)
Duty scaled = Duty scaled factor: Duty cycle correction factor for obtained SAR value, Duty scaled factor [-] = 100(%) / (duty cycle, %)
Tune-up factor: Power tune-up factor for obtained SAR value, Tune-up factor [-] = 1 / (10 ^ ("Deviation from max., dB" / 10))

(Clause 5: SAR TEST PROCEDURE for 5GHz OFDM band, in KDB248227 D01 (v02r02))

5.1.1 Initial Test Position SAR Test Reduction Procedure

1) When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions in that exposure configuration and 802.11 transmission mode combination within the frequency band or aggregated band. SAR is also not required for that exposure configuration in the subsequent test configuration(s).

2) When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest extrapolated or estimated 1-g SAR conditions determined by area scans or next closest/smallest test separation distance and maximum RF coupling test positions based on manufacturer justification, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions (left, right, touch, tilt or subsequent surfaces and edges) are tested.

3) For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

7.4 SAR Measurement Variability

In accordance with published RF Exposure KDB procedure 865664 D01 (v01r04) SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Mode	Frequency [MHz]	Data rate	EUT setup		Measured SAR(1g)		Largest to Smallest SAR Ratio	Remarks	SAR plot # in Appendix 2-2
			Antenna	Position	Original [W/kg]	Repeated [W/kg]			
11a	5260 (52ch)	6Mbps	Main	Long side-main	1.03 (body liquid)	0.996	1.034	*. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20.	Plot 9-1
11a	5260 (52ch)	6Mbps	Main	Long side-main	1.04 (head liquid)	1.04	1.000	*. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20.	Plot 9-2