

SAR TEST REPORT



The following samples were submitted and identified on behalf of the client as:

Product Type	2TX 11ax (WiFi6) + BLE Combo Card
Trade Name	MediaTek
Model Number	MT7921
Company Name	ASUSTeK COMPUTER INC.
Company Address	1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan
Standards	IEEE/ANSI C95.1-1992, IEEE 1528-2013
FCC ID	RAS-MT7921
Date of Receipt	Apr. 14, 2022
Date of Test(s)	Jun 22, 2022 ~ Jun 24, 2022
Date of Issue	Jul. 07, 2022
In the configuration tested, the EUT	complied with the standards specified above.

Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products

in series production are in conformity with the product sample detailed in this report. This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan Ltd. Central RF Lab or testing done by SGS Taiwan Ltd. Central RF Lab in connection with distribution or use of the product described in this report must be approved by SGS Taiwan Ltd. Central RF Lab in writing.

Signed on behalf of SGS

Clerk / Kimmy Chiou	PM / Jasper Wang	Asst. Manager / John Yeh
Kimmy Chiou	Jasper Wang	John Teh

Date: Jul. 07, 2022

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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TESA2204000040EN	Rev.00	Initial creation of document	Jun. 08, 2022	Kimmy Chiou	*
TESA2204000040EN	Rev.01	Modify the host model name	Jun. 23, 2022	Kimmy Chiou	*
TESA2204000040EN	Rev.02	Modify comment	Jul. 07, 2022	Kimmy Chiou	
Note:					

The mark " * " is the revised version of the report due to comments submitted by the certification.

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0. Guidance applied

The SAR testing method and procedure for this device is in accordance with the following standards: IEEE/ANSI C95.1-1992 IEEE 1528-2013 KDB248227D01v02r02 KDB865664D01v01r04 KDB865664D02v01r02 KDB447498D01v06 KDB616217D04v01r02

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1. General Information

1.1 Testing Laboratory

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier	
	1F, No. 8, Alley 15, Lane 120, Sec. 1, NeiHu Road, Neihu	SAR 2	Thursdoo		
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	District, Taipei City, 11493, Taiwan.	SAR 6	TW0029	TW3702	
	•	SAR 1	-		
	Township, Taoyuan County, 33383, Taiwan	SAR 4	TW0028		
	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku	SAR 3			
	District, New Taipei City, Taiwan	SAR 7	TW0027		
Note: Test site	name is remarked on the	equipment list i	in each section of	this report as an	

indication where measurements occurred in specific test site and address.

1.2 Details of Applicant

Company Name	ASUSTeK COMPUTER INC.
Company Address	1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

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1.3 Description of EUT

2TX 11ax (WiFi6) + BLE Combo Card					
MediaTek					
MT7921					
RAS-MT7921					
Product Type: E	xpertbook				
Trade Name: A	Trade Name: ASUS				
Model Name: B5402CB					
Family Model No.: B5402CBA					
All models are electrically identical, different model names					
are for marketing purpose.					
WLAN802.11					
WLAN802.11	Refer to page 19-20				
Bluetooth	76.8%				
WLAN	2412 ~ 2472, 5180 ~ 5240, 5260 ~ 5320, 5500 ~ 5720, 5745 ~ 5825				
Bluetooth	2402 ~ 2480				
	MediaTek MT7921 RAS-MT7921 Product Type: E Trade Name: AS Model Name: B Family Model N All models are e are for marketin WLAN802.11 Bluetooth WLAN				

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Summary of Maximum SAR Value:

Summary of Maximum SAR					
	Highest SAR 1g				
Mode	Body				
	(W/kg)				
Bluetooth(GFSK)	0.12				
2.4G WLAN	0.72				
5.2G WLAN	1.08				
5.3G WLAN	1.12				
5.6G WLAN	1.04				
5.8G WLAN	1.1				

Antenna Information

Vendor		High-tek									
Туре		PIFA									
Antenna		Main Aux									
Part Number		DC33002	R600(0ACCN	022001N)			DC33002	R610(0ACCN	022002N)		
Frequency(MHz)	2400~2500	00~2500 5150~5250 5250~5350 5470~5725 5725~5850 2400~2500 5150~5250 5250~5350 5470~57				5470~5725	5725~5850				
Gain (dBi)	1.81	1.81 3.16 3.16 3.91 4.21					3.13	3.11	4.14	4.22	
	-		•			•		•	•	-	
Vendor					Pu	lse					
Туре					PI	FA					
Antenna			Main					Aux			
Part Number		DC33002R500 (TZ2381D)				DC33002R510 (TZ2381E)					
	2400~2500 5150~5250 5250~5350 5470~5725 5725~5850				2400~2500	5150~5250	5250~5350	5470~5725	5725~5850		
Frequency(MHz)	2400~2500 5150~5250 5250~5350 5470~5725 5725~5850 2400~2500 5150~5250 5250~5350 5470~5725 5. 1.07 2.81 2.81 3.70 3.77 2.59 2.96 3 3.86						5725~5050				

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Conducted power table:

		1	Main	Main								
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)						
		1	2412		16.50	16.41						
	802.11b	6	2437	1Mbps	16.50	16.47						
		11	2462		16.50	16.12						
		1	2412		16.50	16.01						
	802.11g	6	2437	6Mbps	16.50	15.95						
		11	2462		16.50	15.98						
	802.11n20-HT0	1	2412		16.50	15.96						
		6	2437	MCS0	16.50	15.84						
		11	2462		16.50	15.83						
	802.11ac20-VHT0	1	2412	MCS0	16.50	15.88						
		6	2437		16.50	15.92						
2.45GHz		11	2462		16.50	15.90						
2.40012	802.11ax20-HE0	1	2412	MCS0	16.50	15.94						
		6	2437		16.50	15.98						
		11	2462		16.50	15.94						
		3	2422	MCS0	15.00	14.41						
	802.11n40-HT0	6	2437		16.00	15.38						
		9	2452		15.00	14.40						
		3	2422		15.00	14.32						
	802.11ac40-VHT0	6	2437	MCS0	16.00	15.34						
		9	2452]	15.00	14.38						
		3	2422		15.00	14.37						
	802.11ax40-HE0	6	2437	MCS0	16.00	15.33						
		9	2452		15.00	14.49						

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		1	Main			
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
		36	5180		11.50	11.10
	802.11a	40	5200	6Mbbb	11.50	11.10
	802.11a	44	5220	6Mbps	11.50	11.19
		48	5240		11.50	11.22
		36	5180		11.50	11.24
	802.11n20-HT0	40	5200	MCS0	11.50	11.21
	802.11120-HTU	44	5220	10030	11.50	11.29
		48	5240		11.50	11.24
	802.11ac20-VHT0	36	5180	MCS0	11.50	11.16
		40	5200		11.50	11.27
		44	5220		11.50	11.13
5.15-5.25 GHz		48	5240		11.50	11.18
5.15-5.25 GHZ		36	5180		11.50	11.19
	802.11ax20-HE0	40	5200	MCS0	11.50	11.17
	802.11ax20-HE0	44	5220	100.50	11.50	11.20
		48	5240		11.50	11.27
	802.11n40-HT0	38	5190	MCS0	11.50	11.49
	002.11140-010	46	5230	10030	11.50	11.47
	802.11ac40-VHT0	38	5190	MCS0	11.50	11.14
	002.114040-01110	46	5230	IVICOU	11.50	11.18
	802.11ax40-HE0	38	5190	MCS0	11.50	11.13
	002.11ax40-nEU	46	5230	IVICOU	11.50	11.17
	802.11ac80-VHT0	42	5210	MCS0	11.50	11.37
	802.11ax80-HE0	42	5210	MCS0	11.50	11.14

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	Main									
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)				
		52	5260		12.00	11.61				
	802.11a	56	5280	6Mbps	12.00	11.60				
	002.11a	60	5300	olviops	12.00	11.75				
		64	5320		12.00	11.78				
		52	5260		12.00	11.63				
	802.11n20-HT0	56	5280	MCS0	12.00	11.78				
		60	5300	10030	12.00	11.60				
		64	5320		12.00	11.68				
	802.11ac20-VHT0	52	5260	MCS0	12.00	11.72				
		56	5280		12.00	11.65				
5.25-5.35 GHz		60	5300		12.00	11.71				
0.20-0.00 ONZ		64	5320		12.00	11.62				
		52	5260		12.00	11.70				
	802.11ax20-HE0	56	5280	MCS0	12.00	11.78				
	002.110,20-1120	60	5300	NIC SU	12.00	11.60				
		64	5320		12.00	11.61				
	802.11n40-HT0	54	5270	MCS0	12.00	11.69				
	002.11140-1110	62	5310	10030	12.00	11.63				
	802.11ax40-HE0	54	5270	MCS0	12.00	11.60				
		62	5310	10000	12.00	11.62				
	802.11ac80-VHT0	58	5290	MCS0	12.00	11.78				
	802.11ax80-HE0	58	5290	MCS0	12.00	11.64				

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		1	Main			
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
		100	5500		9.00	8.75
	000.44-	120	5600	CN/hana	9.00	8.71
	802.11a	140	5700	6Mbps	9.00	8.73
		144	5720		9.00	8.66
		100	5500		9.00	8.73
	802.11n20-HT0	120	5600	MCS0	9.00	8.71
	002.11120-010	140	5700	IVIC SU	9.00	8.79
		144	5720		9.00	8.80
		100	5500		9.00	8.75
	802.11ac20-VHT0	120	5600	MCS0	9.00	8.75
	002.11ac20-VH10	140	5700	IVIC SU	9.00	8.68
		144	5720		9.00	8.68
		100	5500		9.00	8.79
	802.11ax20-HE0	120	5600	MCS0	9.00	8.65
	002. Hax20-FIEU	140	5700	IVIC SU	9.00	8.66
		144	5720		9.00	8.80
5.6GHz		102	5510		9.00	8.65
5.00112	802.11n40-HT0	118	5590	MCS0	9.00	8.65
	002.11140-1110	134	5670	10030	9.00	8.70
		142	5710		9.00	8.61
		102	5510		9.00	8.67
	802.11ac40-VHT0	118	5590	MCS0	9.00	8.65
	002.1100-0-01110	134	5670	NIC GO	9.00	8.68
		142	5710		9.00	8.61
		102	5510		9.00	8.61
	802.11ax40-HE0	118	5590	MCS0	9.00	8.79
		134	5670	10000	9.00	8.76
		142	5710		9.00	8.72
		106	5530		9.00	8.74
	802.11ac80-VHT0	122	5610	MCS0	9.00	8.66
		138	5690		9.00	8.96
		106	5530		9.00	8.70
	802.11ax80-HE0	122	5610	MCS0	9.00	8.68
		138	5690		9.00	8.69

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Main									
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)			
		149	5745		8.00	7.79			
	802.11a	157	5785	6Mbps	8.00	7.76			
		165	5825		8.00	7.66			
		149	5745		8.00	7.67			
	802.11n20-HT0	157	5785	MCS0	8.00	7.64			
		165	5825		8.00	7.61			
		149	5745		8.00	7.67			
	802.11ac20-VHT0	157	5785	MCS0	8.00	7.73			
		165	5825		8.00	7.79			
5.8GHz		149	5745		8.00	7.80			
5.0GHZ	802.11ax20-HE0	157	5785	MCS0	8.00	7.61			
		165	5825		8.00	7.61			
	802.11n40-HT0	151	5755	MCS0	8.00	7.98			
	002.11140-010	159	5795	IVIC SU	8.00	7.93			
	802.11ac40-VHT0	151	5755	MCS0	8.00	7.67			
	002.11ac40-VH10	159	5795	IVIC SU	8.00	7.70			
	802.11ax40-HE0	151	5755	MCS0	8.00	7.70			
	002.11ax40-nEU	159	5795	IVICSU	8.00	7.68			
	802.11ac80-VHT0	155	5775	MCS0	8.00	7.71			
	802.11ax80-HE0	155	5775	MCS0	8.00	7.67			

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			Aux			
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
		1	2412		16.50	16.33
	802.11b	6	2437	1Mbps	16.50	16.23
		11	2462		16.50	16.28
		1	2412		16.50	15.88
	802.11g	6	2437	6Mbps	16.50	15.98
		11	2462		16.50	15.91
		1	2412		16.50	16.00
	802.11n20-HT0	6	2437	MCS0	16.50	15.84
		11	2462		16.50	15.94
		1	2412		16.50	16.00
	802.11ac20-VHT0	6	2437	MCS0	16.50	15.99
2.45GHz		11	2462		16.50	15.90
2.43GHZ		1	2412		16.50	15.86
	802.11ax20-HE0	6	2437	MCS0	16.50	15.85
		11	2462		16.50	15.94
		3	2422		15.00	14.35
	802.11n40-HT0	6	2437	MCS0	16.00	15.35
		9	2452		15.00	14.50
		3	2422		15.00	14.38
	802.11ac40-VHT0	6	2437	MCS0	16.00	15.51
		9	2452]	15.00	14.36
		3	2422		15.00	14.49
	802.11ax40-HE0	6	2437	MCS0	16.00	15.51
		9	2452		15.00	14.36

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			Aux			
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
		36	5180		14.00	13.51
	802.11a	40	5200	6Mbpa	14.00	13.41
	002.11a	44	5220	6Mbps	14.00	13.46
		48	5240		14.00	13.44
		36	5180		14.00	13.40
	802.11n20-HT0	40	5200	MCS0	14.00	13.35
	002.11120-010	44	5220	10030	14.00	13.49
		48	5240		14.00	13.38
		36	5180		14.00	13.39
	802.11ac20-VHT0	40	5200	MCS0	14.00	13.50
	002.11ac20-VH10	44	5220	10030	14.00	13.43
5.15-5.25 GHz		48	5240		14.00	13.42
5.15-5.25 GHZ		36	5180		14.00	13.44
	802.11ax20-HE0	40	5200	MCS0	14.00	13.41
	002.11ax20-ne0	44	5220	10030	14.00	13.47
		48	5240		14.00	13.41
	802.11n40-HT0	38	5190	MCS0	14.00	13.50
	002.11140-010	46	5230	10030	14.00	13.40
	802.11ac40-VHT0	38	5190	MCS0	14.00	13.40
	002.114040-0110	46	5230	IVICOU	14.00	13.36
	802.11ax40-HE0	38	5190	MCS0	14.00	13.50
	002.11aX40-HEU	46	5230	10030	14.00	13.45
	802.11ac80-VHT0	42	5210	MCS0	14.00	13.95
	802.11ax80-HE0	42	5210	MCS0	14.00	13.34

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			Aux			
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
		52	5260		14.00	13.45
	802.11a	56	5280	6Mbps	14.00	13.43
	002.11a	60	5300	olviops	14.00	13.34
		64	5320		14.00	13.43
		52	5260		14.00	13.47
	802.11n20-HT0	56	5280	MCS0	14.00	13.33
	002.11120-1110	60	10030	14.00	13.34	
		64	5320		14.00	13.34
		52	5260		14.00	13.41
	802.11ac20-VHT0	56	5280	MCS0	14.00	13.44
5.25-5.35 GHz	002.118020-01110	60	5300	10030	14.00	13.49
J.20-J.30 GHZ		64	5320		14.00	13.34
		52	5260		14.00	13.51
	802.11ax20-HE0	56	5280	MCS0	14.00	13.42
	002.118.20-1120	60	5300	10030	14.00	13.33
		64	5320		14.00	13.37
	802.11n40-HT0	54	5270	MCS0	14.00	13.39
	002.11140-1110	62	5310	10030	14.00	13.33
	802.11ax40-HE0	54	5270	MCS0	14.00	13.41
		62	5310		14.00	13.47
	802.11ac80-VHT0	58	5290	MCS0	14.00	13.78
	802.11ax80-HE0	58	5290	MCS0	14.00	13.42

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			Aux			
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
		100	5500		15.00	14.38
	000 44-	120	5600	014	15.00	14.40
	802.11a	140	5700	6Mbps	15.00	14.38
		144	5720		15.00	14.34
		100	5500		15.00	14.46
	802.11n20-HT0	120	5600	MCS0	15.00	14.47
	802.11h20-H10	140	5700	IVICSU	15.00	14.38
		144	5720		15.00	14.45
		100	5500		15.00	14.38
	802.11ac20-VHT0	120	5600	MCS0	15.00	14.39
	802.11ac20-VH10	140	5700	IVIC SU	15.00	14.40
		144	5720		15.00	14.37
		100	5500		15.00	14.45
	802.11ax20-HE0	120	5600	MCS0	15.00	14.48
	002.11ax20-FIEU	140	5700	IVIC SU	15.00	14.41
		144	5720		15.00	14.42
5.6GHz		102	5510		15.00	14.52
5.00112	802.11n40-HT0	118	5590	MCS0	15.00	14.48
	002.11140-1110	134	5670	10030	15.00	14.36
		142	5710		15.00	14.50
		102	5510		15.00	14.46
	802.11ac40-VHT0	118	5590	MCS0	15.00	14.35
	002.110040 1110	134	5670	MOOD	15.00	14.35
		142	5710		15.00	14.46
		102	5510		15.00	14.49
	802.11ax40-HE0	118	5590	MCS0	15.00	14.42
		134	5670	10000	15.00	14.39
		142	5710		15.00	14.41
		106	5530		14.50	14.42
	802.11ac80-VHT0	122	5610	MCS0	15.00	14.87
		138	5690		15.00	14.96
		106	5530		14.50	14.25
	802.11ax80-HE0	122	5610	MCS0	15.00	14.76
		138	5690		15.00	14.81

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Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
		149	5745		15.50	14.93
	802.11a	157	5785	6Mbps	15.50	14.98
		165	5825		15.50	14.95
		149	5745		15.50	14.84
	802.11n20-HT0	157	5785	MCS0	15.50	14.96
		165	5825		15.50	14.95
		149	5745		15.50	14.99
	802.11ac20-VHT0	157	5785	MCS0	15.50	14.97
		165	5825		15.50	14.99
5.8GHz		149	5745		15.50	14.84
5.0GHZ	802.11ax20-HE0	157	5785	MCS0	15.50	14.92
		165	5825		15.50	15.01
	802.11n40-HT0	151	5755	MCS0	15.50	15.45
	002.11140-010	159	5795	IVIC SU	15.50	15.42
	802.11ac40-VHT0	151	5755	MCS0	15.50	15.02
	002.11ac40-VH10	159	5795	10030	15.50	14.87
	802.11ax40-HE0	151	5755	MCS0	15.50	14.83
	002.118X40-HEU	159	5795	IVICSU	15.50	14.88
	802.11ac80-VHT0	155	5775	MCS0	15.50	15.46
	802.11ax80-HE0	155	5775	MCS0	15.50	14.83

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Bluetooth conducted power table:

			1Mbps	1Mbps 2Mbps 3Mbps				
Mode	Channel	Frequency (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
	CH 00	2402		10.74		8.12		8.14
BR/EDR	CH 39	2441	11.50	10.67	8.50	7.93	8.50	7.92
	CH 78	2480		10.47		7.88		7.87

Mode	Channel	Frequency	(GFSK
Mode	Channel	(MHz)	Max. Rated Avg.Power + Max. Tolerance (dBm)	Average Output Power (dBm)
	CH 00	2402		11.46
BLE_1M	CH 19	2440	11.5	11.37
	CH 39	2480		11.18

Mode	Channel	Frequency	C	GFSK
Mode	Channel	(MHz)	Max. Rated Avg.Power + Max. Tolerance (dBm)	Average Output Power (dBm)
	CH 00	2402		11.43
BLE_2M	CH 19	2440	11.5	11.27
	CH 39	2480		11.09

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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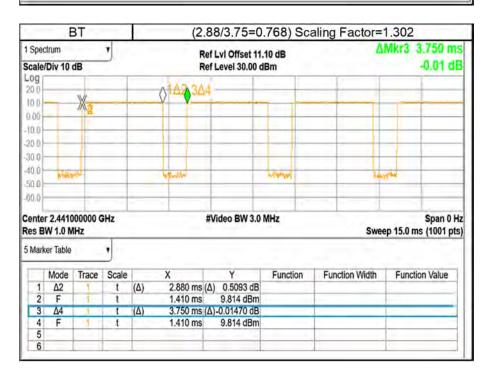
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Duty Cycle:

	2.4G	b dut	y	Ś	(8.37/8.46=0.989) Scaling Factor=1.011						
1 Spectrum Scale/Div 10 dB			,	_	Ref Level 10.00	dBm	۵	Mkr3 8.460 ms -0.28 dB			
Log		ub			Nel Level 10.00			-0.00 00			
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10.0		_	_	1112							
20.0	-	_	_								
30.0		100									
40.0											
50 0											
60.0						1					
70.0											
50.0	-	-	_								
	r 2.4120 W 8 MH	000000 d	SHz		Video BW 8.0	MHz	Swee	Span 0 Hz p 30.0 ms (1001 pts)			
5 Mari	ker Table		,								
	Mode	Trace	Scale	x	Y	Function	Function Width	Function Value			
1	Δ2	1	t	(Δ) 8.370	ms (A) -0.7783 dB	-					
2	F	1	t	9.870							
3	Δ4	1-1-	1 1 -	(Δ) 8.460	ms (Δ) -0.2785 dB		1				
4	F	1.1.5	t	9.870	ms -0.8729 dBm			[]			
5											
6											



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lkr3 8.025 ms 0.32 dB	Δ1			vi Offset 11. evel 30.00 di	25.5			•	trum Div 10 (1 Spec		
	1.0304	-unit	-			al and a					20.0	
				-	+		_			_	0.00	
			_	1-1-	-				1	_	-20.0 -30.0 -40.0	
											-50.0	
Span 0 Hz 25.0 ms (1001 pts)	Swee		IHz	deo BW 8.0 N	Vi	1		Hz	00000 G z	5.2100 W 8 MH	Cente	
			2.2					•		er Table	5 Mark	
Function Value	nction Width	F	Function	Y		x		Scale	Trace	Mode		
				-0.8584 dB	(Δ)	7.900 ms	(Δ)	t.	1	Δ2	1	
				13.37 dBm	-	11.00 ms		1	1	F	2	
		1			(Δ)	8.025 ms	(Δ)	t	1	Δ4	3	
				13.37 dBm		11.00 ms		t	1.1	F	4	
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1.4 Test Environment

Ambient Temperature: 22±2° C Tissue Simulating Liquid: 22±2° C

1.5 Operation Description

Use chipset specific software to control the EUT, and makes it transmit in maximum power. Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.

Laptop mode

SAR is measured with display screen open at 90 degree and bottom side/front edge of keyboard touch against the flat phantom.

Note:

802.11b DSSS SAR Test Requirements:

- SAR is measured for 2.4 GHz 802.11b DSSS mode using the highest measured maximum output power channel, 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.
- 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.

802.11g/n OFDM SAR Test Exclusion Requirements:

3. SAR is not required for 802.11g/n since 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.

Initial Test Configuration:

- 4. An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band.
- 5. SAR is measured using the highest measured maximum output power channel.

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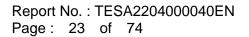


When the reported SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for the subsequent next highest measured output power channel(s) in the initial test configuration until the reported SAR is \leq 1.2 W/kg or all required channels are tested.

- 6. Since the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for subsequent test configuration.
- 7. According to KDB447498 D01, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is \leq 0.8 W/kg, when the transmission band is \leq 100 MHz.
- According to KDB865664 D01, SAR measurement variability must be assessed for each frequency band. When the original highest measured SAR is ≥ 0.8 W/kg, repeated that measurement once. 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 \geq 1.45 W/kg (~10% from the 1-g SAR limit)

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1.6 The SAR Measurement System

A block diagram of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 5 professional system). The model EX3DV4 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|²)/ ρ where σ and ρ are the conductivity and mass density of the tissuesimulant.

The DASY 5 system for performing compliance tests consists of the following items:

- 1. A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
- 2. A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage intissue simulating liquid. The probe is equipped with an optical surface detector system.
- 3. A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

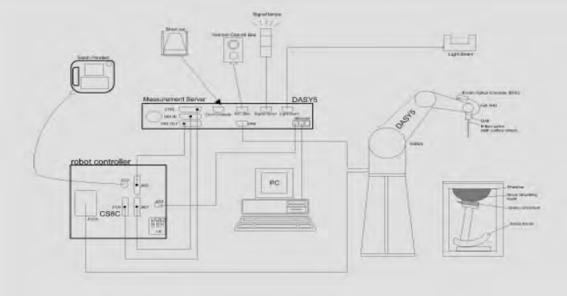


Fig. a The block diagram of SAR system

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- 4. The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- 5. The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- 6. A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- 7. A computer operating Windows 7.
- 8. DASY 5 software.
- 9. Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- 10. Tissue simulating liquid mixed according to the given recipes.
- 11. Validation dipole kits allowing to validate the proper functioning of the system.

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1.7 System Components

EX3DV4 E-Field Probe

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)					
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 2450/5250/5600/5750 MHz Additional CF for other liquids and frequencies upon request					
Frequency	10 MHz to > 6 GHz					
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)					
Dynamic	$10 \mu\text{W/g}$ to > 100 mW/g					
Range	Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)					
Dimensions	Tip diameter: 2.5 mm					
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.					

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PHANTOM

Model	ELI
Construction	The ELI phantom is used for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.
Shell	2 ± 0.2 mm
Thickness	
Filling Volume	Approx. 30 liters
Dimensions	Major axis: 600 mm
	Minor axis: 400 mm

DEVICE HOLDER

Construction	The device holder (Supporter) for Notebook is made by POM (polyoxymethylene resin), which is non-metal and non-conductive. The height can be adjusted to fit varies kind of notebooks.	
		Device Holder

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1.8 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/-10% from the target SAR values. These tests were done at 2450/5250/5600/5750 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1 (SAR values are normalized to 1W forward power delivered to the dipole). During the tests, the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

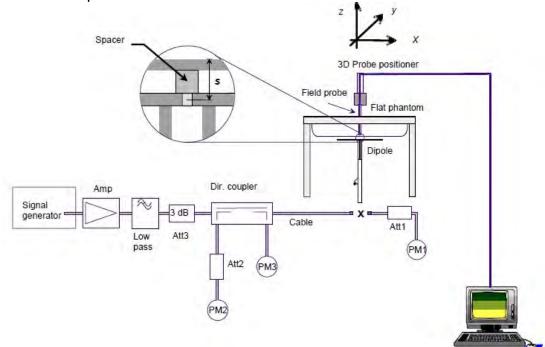


Fig. b The block diagram of system verification

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Validation Kit	S/N	Frequency (MHz)	1W Target 1g-SAR (W/kg)	pin=250mW Measured 1g-SAR (W/kg)	Normalized to 1W 1g-SAR (W/kg)	Deviation (%)	Limit	Measurement Date
D2450V2	727	2450	52.8	12.9	51.6	-2.27	± 10%	Jun.22,2022

Validation Kit	S/N	Frequency (MHz)	1W Target 1g-SAR (W/kg)	pin=100mW Measured 1g-SAR (W/kg)	Normalized to 1W 1g-SAR (W/kg)	Deviation (%)	Limit	Measurement Date
D5GHzV2	1023	5250	81	8.15	81.5	0.62	± 10%	Jun.23,2022
D5GHzV2	1023	5600	84.4	8.18	81.8	-3.08	± 10%	Jun.24,2022
D5GHzV2	1023	5750	81	8.11	81.1	0.12	± 10%	Jun.24,2022

Table 1. Results of system validation

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1.9 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this Head-simulant fluid were measured by using the SPEAG Dielectric Assessment Kit (DAKS-3.5)

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The measured conductivity and permittivity are all within ± 5% of the target values.

The depth of the tissue simulant in the flat section of the phantom was ≥ 15 cm ± 5 mm during all tests. (Fig. 2)

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	% dev εr	% dev σ
		2402	39.285	1.757	38.945	1.751	-0.87%	-0.36%
		2412	39.268	1.766	38.927	1.759	-0.87%	-0.38%
		2437	39.223	1.788	38.883	1.781	-0.87%	-0.43%
	Jun. 22, 2022	2442	39.214	1.793	38.874	1.785	-0.87%	-0.44%
		2450	39.200	1.800	38.859	1.792	-0.87%	-0.45%
		2462	39.185	1.813	38.844	1.802	-0.87%	-0.59%
		2480	39.162	1.827	38.821	1.818	-0.87%	-0.46%
	Jun. 23, 2022	5190	35.997	4.645	35.657	4.597	-0.95%	-1.02%
Llaad		5210	35.974	4.665	35.634	4.618	-0.95%	-1.02%
Head		5250	35.929	4.706	35.588	4.658	-0.95%	-1.02%
		5270	35.906	4.727	35.565	4.679	-0.95%	-1.02%
		5290	35.883	4.747	35.542	4.699	-0.95%	-1.02%
		5310	35.860	4.768	35.519	4.719	-0.95%	-1.01%
		5600	35.529	5.065	35.188	5.015	-0.96%	-0.99%
		5690	35.426	5.157	35.085	5.106	-0.96%	-1.00%
	Jun. 24, 2022	5750	35.357	5.218	35.017	5.167	-0.96%	-0.97%
		5755	35.351	5.224	35.011	5.172	-0.96%	-1.00%
		5775	35.329	5.244	34.988	5.192	-0.96%	-1.00%

Table 2. Dielectric Parameters of Tissue Simulant Fluid

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The composition of the brain tissue simulating liquid is:

Simulating Liquids for 600 MHz -10 GHz, Manufactured by SPEAG:

Broad-band head	SPEAG Product	Frequency range (MHz)	Main Ingredients
tissue simulating liquids	HBBL600- 10000V6	600 - 10000	Water, Oil

Table 3. Recipes for tissue simulating liquid

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1.10 Evaluation Procedures

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

- 1. The extraction of the measured data (grid and values) from the Zoom Scan.
- 2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- 3. The generation of a high-resolution mesh within the measured volume
- 4. The interpolation of all measured values from the measurement grid to the highresolution arid
- 5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- 6. The calculation of the averaged SAR within masses of 1g and 10g.

The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within -2 dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans. The routines are verified and optimized for the grid dimensions used in these cube measurements.

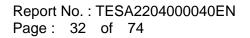
The measured volume of 30x30x30mm contains about 30g of tissue.

The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D

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interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is the moved around until the highest averaged SAR is found. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

1.11 Probe Calibration Procedures

For the calibration of E-field probes in lossy liquids, an electric field with an accurately known field strength must be produced within the measured liquid. For standardization purposes it would be desirable if all measurements which are necessary to assess the correct field strength would be traceable to standardized measurement procedures. In the following two different calibration techniques are summarized:

1.11.1 Transfer Calibration with Temperature Probes

In lossy liquids the specific absorption rate (SAR) is related both to the electric field (*E*) and the temperature gradient ($\delta T / \delta t$) in the liquid.

$$SAR = C \frac{\delta T}{\delta t}$$
,

whereby σ is the conductivity, ρ the density and c the heat capacity of the liquid.

Hence, the electric field in lossy liquid can be measured indirectly by measuring the temperature gradient in the liquid. Non-disturbing temperature probes (optical probes or thermistor probes with resistive lines) with high spatial resolution (<1-2 mm) and fast reaction time (<1 s) are available and can be easily calibrated with high precision [1]. The setup and the exciting source have no influence on the calibration; only the relative positioning uncertainties of the standard temperature probe and the E-field probe to be calibrated must be considered. However, several problems limit the available accuracy of probe calibrations with temperature probes:

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- The temperature gradient is not directly measurable but must be evaluated from temperature measurements at different time steps. Special precaution is necessary to avoid measurement errors caused by temperature gradients due to energy equalizing effects or convection currents in the liquid. Such effects cannot be completely avoided, as the measured field itself destroys the thermal equilibrium in the liquid. With a careful setup these errors can be kept small.
- The measured volume around the temperature probe is not well defined. It is difficult to calculate the energy transfer from a surrounding gradient temperature field into the probe. These effects must be considered, since temperature probes are calibrated in liquid with homogeneous temperatures. There is no traceable standard for temperature rise measurements.
- The calibration depends on the assessment of the specific density, the heat capacity and the conductivity of the medium. While the specific density and heat capacity can be measured accurately with standardized procedures (~ 2% for c; much better for ρ), there is no standard for the measurement of the conductivity. Depending on the method and liquid, the error can well exceed ±5%.
- Temperature rise measurements are not very sensitive and therefore are often performed at a higher power level than the E-field measurements. The nonlinearities in the system (e.g., power measurements, different components, etc.) must be considered.

Considering these problems, the possible accuracy of the calibration of Efield probes with temperature gradient measurements in a carefully designed setup is about ±10% (RSS) [2]. Recently, a setup which is a combination of the waveguide techniques and the thermal measurements was presented in [3]. The estimated uncertainty of the setup is $\pm 5\%$ (RSS) when the same liquid is used for the calibration and for actual measurements and ±7-9% (RSS) when not, which is in good agreement with the estimates given in [2].

1.11.2 Calibration with Analytical Fields

In this method a technical setup is used in which the field can be calculated analytically from measurements of other physical magnitudes (e.g., input power). This corresponds to the standard field method for probe calibration in air; however, there is no standard defined for fields in lossy liquids.

When using calculated fields in lossy liquids for probe calibration, several points must be considered in the assessment of the uncertainty:

- The setup must enable accurate determination of the incident power.
- The accuracy of the calculated field strength will depend on the assessment of the dielectric parameters of the liquid.
- Due to the small wavelength in liquids with high permittivity, even small

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setups might be above the resonant cutoff frequencies. The field distribution in the setup must be carefully checked for conformity with the theoretical field distribution.

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1.12 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1, By the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter. Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

- Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the (1) whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube).
- Occupational/Controlled limits apply when persons are exposed as a (2) consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.
- Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged (3) over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer

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devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section. (Table 4.)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR (Brain)	1.60 W/kg	8.00 W/kg
Spatial Average SAR (Whole Body)	0.08 W/kg	0.40 W/kg
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 W/kg	20.00 W/kg

Table 4. RF exposure limits

Notes:

- 1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
- 2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

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2. Summary of Results

2.1 Decision rules

Reported measurement data comply with IEEE 1528-2013: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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2.2 Summary of Results

High-Tek

Mode											
	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Duty cycle	Power	Averaged SAR	over 1g (W/kg)	D
		(mm)		(WIFIZ)	Tolerance (dBm)	(dBm)	scaling	scaling	Measured	Reported	
WLAN 802.11b	Bottom Surface	0	1	2412	16.50	16.41	1.011	102.09%	0.611	0.631	
WLAN 802.11b	Bottom Surface	0	6	2437	16.50	16.47	1.011	100.69%	0.622	0.633	001
WLAN 802.11b	Bottom Surface	0	11	2462	16.50	16.12	1.011	109.14%	0.525	0.579	-
WLAN 802.11b	Front Edge	0	6	2437	16.50	16.47	1.011	100.69%	0.464	0.472	
Mode	Position	Distance (mm)	сн	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR		D
						()			Measured	Reported	
WLAN 802.11n(40M) 5.2G	Front Edge	0	38	5190	11.50	11.49	1.012	100.23%	0.869	0.881	
WLAN 802.11n(40M) 5.2G	Front Edge*	0	38	5190	11.50	11.49	1.012	100.23%	0.831	0.843	
WLAN 802.11n(40M) 5.2G	Front Edge	0	46	5230	11.50	11.47	1.012	100.69%	0.823	0.839	-
WLAN 802.11ac(80M) 5.2G	Bottom Surface	0	42	5210	11.50	11.37	1.016	103.04%	0.213	0.223	- 002
WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G	Front Edge*	0	42	5210 5210	11.50 11.50	11.37 11.37	1.016	103.04% 103.04%	0.926	0.969 0.950	002
TEST COLL TRUCTORY 0.20	T Tone Edge	0	12	0210	11.00	11.07	1.012	100.0470	0.011	0.000	
Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR Measured	over 1g (W/kg) Reported	D
WLAN 802.11n(40M) 5.3G	Front Edge	0	54	5270	12.00	11.69	1.012	107.40%	0.772	0.839	-
WLAN 802.11n(40M) 5.3G WLAN 802.11ac(80M) 5.3G	Front Edge Bottom Surface	0	62 58	5310 5290	12.00 12.00	11.63 11.78	1.012	108.89% 105.20%	0.736	0.811 0.251	
WLAN 802.11ac(80M) 5.3G	Front Edge	0	58	5290	12.00	11.78	1.016	105.20%	0.235	1.067	003
WLAN 802.11ac(80M) 5.3G	Front Edge*	0	58	5290	12.00	11.78	1.016	105.20%	0.941	1.006	005
WLAIN 802.1120(8000) 5.30	FIOILEUge	U	50	5290	12.00	11.70	1.010	103.20%	0.941	1.008	
Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR Measured	over 1g (W/kg) Reported	D
WI AN 802 11 ac (80M) 5.6G	Bottom Surface	0	138	5690	9.00	8.96	1.016	100.93%	0.211	0.216	
WLAN 802.11ac(80M) 5.6G WLAN 802.11ac(80M) 5.6G	Bottom Surface Front Edge	0	138	5530	9.00	8.74	1.016	106.17%	0.945	1.019	-
WLAN 802.11ac(80M) 5.6G	Front Edge	0	122	5610	9.00	8.66	1.016	108.14%	0.917	1.008	
WLAN 802.11ac(80M) 5.6G	Front Edge	0	138	5690	9.00	8.96	1.016	100.93%	1.010	1.036	004
WLAN 802.11ac(80M) 5.6G	Front Edge*	0	138	5690	9.00	8.96	1.016	100.93%	0.988	1.013	-
			•						•		
Mode	Position	Distance (mm)		Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR Measured	over 1g (W/kg) Reported	D
WLAN 802.11n(40M) 5.8G	Front Edge	0	151	5755	8.00	7.98	1.012	100.46%	0.941	0.957	
WLAN 802.11n(40M) 5.8G	Front Edge*	0	151	5755	8.00	7.98	1.012	100.46%	0.926	0.941	
WLAN 802.11n(40M) 5.8G	Front Edge	0	159	5795	8.00	7.93	1.012	101.62%	0.903	0.929	-
WLAN 802.11ac(80M) 5.8G	Bottom Surface	0	155	5775	8.00	7.71	1.016	106.91%	0.208	0.226	
WLAN 802.11ac(80M) 5.8G	Front Edge	0	155	5775	8.00	7.71	1.016	106.91%	0.966	1.049	005
WLAN 802.11ac(80M) 5.8G											
WEAN 802.1120(8000) 5.80	Front Edge*	0	155	5775	8.00	7.71	1.016	106.91%	0.938	1.019	
Aux Mode	Front Edge*	0 Distance (mm)	155 CH	5775 Freq. (MHz)	8.00 Max. Rated Avg. Power + Max.	7.71 Measured Avg. Power			0.938 Averaged SAR	1.019 over 1g (W/kg)	- ID
Aux	Position	Distance (mm)	СН	Freq. (MHz)	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm)	7.71 Measured Avg. Power (dBm)	1.016 Duty cycle scaling	106.91% Power scaling	0.938 Averaged SAR Measured	1.019 over 1g (W/kg) Reported	
Aux Mode WLAN 802.11b	Position Bottom Surface	Distance (mm) 0	CH 1	Freq. (MHz) 2412	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50	7.71 Measured Avg. Power (dBm) 16.33	1.016 Duty cycle scaling 1.011	106.91% Power scaling 103.99%	0.938 Averaged SAR Measured 0.231	1.019 over 1g (W/kg) Reported 0.243	
Aux Mode WLAN 802.11b WLAN 802.11b	Position Bottom Surface Front Edge	Distance (mm) 0	CH 1 6	Freq. (MHz) 2412 2437	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50	7.71 Measured Avg. Power (dBm) 16.33 16.23	1.016 Duty cycle scaling 1.011 1.011	106.91% Power scaling 103.99% 106.41%	0.938 Averaged SAR Measured 0.231 0.611	1.019 over 1g (W/kg) Reported 0.243 0.657	-
Aux Mode WLAN 802.11b	Position Bottom Surface	Distance (mm) 0	CH 1	Freq. (MHz) 2412	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50	7.71 Measured Avg. Power (dBm) 16.33	1.016 Duty cycle scaling 1.011	106.91% Power scaling 103.99%	0.938 Averaged SAR Measured 0.231	1.019 over 1g (W/kg) Reported 0.243	-
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b	Position Bottom Surface Front Edge Front Edge	Distance (mm) 0 0 0 0 Distance	CH 1 6 11	Freq. (MHz) 2412 2437 2462	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 Max. Rated Avg. Power + Max.	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.28 16.33 Measured Avg. Power	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 Duty cycle	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power	0.938 Averaged SAR Measured 0.231 0.611 0.624	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b	Position Bottom Surface Front Edge Front Edge Front Edge	Distance (mm) 0 0 0	CH 1 6 11 1	Freq. (MHz) 2412 2437 2462 2412 Freq.	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.23 16.33 Measured	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011	106.91% Power scaling 103.99% 106.41% 105.20% 103.99%	0.938 Averaged SAR Measured 0.231 0.611 0.624 0.689	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode	Position Front Edge Front Edge Front Edge Pront Edge	Distance (mm) 0 0 0 Distance (mm)	CH 1 6 11 1 1 CH	Freq. (MHz) 2412 2437 2462 2412 Freq. (MHz)	8.00 Max. Rated Avg. POwer + Max. Tolerance (dBm) 16.50 17.50 18.50	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.28 16.33 Measured Avg. Power (dBm)	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 Duty cycle scaling	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power scaling	0.938 Averaged SAR Measured 0.231 0.611 0.624 0.689 Averaged SAR Measured	1.019 over 1g (W/kg) Reported 0.243 0.657 0.654 0.724 over 1g (W/kg) Reported	- D
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK)	Position Bottom Surface Front Edge Front Edge Pront Edge Position Bottom Surface	Distance (mm) 0 0 0 Distance (mm) 0	CH 1 6 11 1 CH 0	Freq. (MHz) 2412 2437 2462 2412 2412 2412 Freq. (MHz) 2402	8.00 Max Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.23 16.23 16.23 16.33 Measured Avg. Power (dBm) 10.74	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power scaling 119.12%	0.938 Averaged SAR Measured 0.231 0.611 0.624 0.669 Averaged SAR Measured 0.014	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 over 1g (W/kg) Reported 0.022	- D
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode	Position Front Edge Front Edge Front Edge Pront Edge	Distance (mm) 0 0 0 Distance (mm)	CH 1 6 11 1 1 CH	Freq. (MHz) 2412 2437 2462 2412 Freq. (MHz)	8.00 Max. Rated Avg. POwer + Max. Tolerance (dBm) 16.50 17.50 18.50	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.28 16.33 Measured Avg. Power (dBm)	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 Duty cycle scaling	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power scaling	0.938 Averaged SAR Measured 0.231 0.611 0.624 0.689 Averaged SAR Measured	1.019 over 1g (W/kg) Reported 0.243 0.657 0.654 0.724 over 1g (W/kg) Reported	- D
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bilaetooth(GFSK)	Position Bottom Surface Front Edge Front Edge Pront Edge Position Bottom Surface	Distance (mm) 0 0 0 Distance (mm) 0	CH 1 6 11 1 CH 0	Freq. (MHz) 2412 2437 2462 2412 2412 2412 Freq. (MHz) 2402	8.00 Max Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Tolerance (dBm) Tolerance (dBm) Tolerance (dBm) 11.50	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.23 16.23 16.23 16.33 Measured Avg. Power (dBm) 10.74	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power scaling 119.12%	0.938 Averaged SAR Measured 0.231 0.611 0.611 0.624 0.689 Averaged SAR Measured 0.014 0.074 Averaged S	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 over 1g (W/kg) Reported 0.022	- D
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode	Position Eottom Surface Front Edge Front Edge Position Bottom Surface Front Edge Position	Distance (rmm) 0 0 0 Distance (rmm) 0 Distance (rmm)	CH 1 6 11 1 CH 0 0 CH CH	Freq. (MHz) 2412 2437 2462 2412 2412 (MHz) 2402 2402 2402 2402 2402 2402	8.00 Max Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max Rated Avg. Power + Max. Tolerance (dBm) 11.50 Max Rated Avg. Power + Max. Tolerance (dBm)	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.23 16.23 16.33 Measured Avg. Power (dBm) 10.74 10.74 Measured Avg. Power (dBm)	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302 1.302 Duty cycle scaling Duty cycle	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power scaling Power scaling	0.938 Averaged SAR Measured 0.231 0.611 0.611 0.624 0.689 Averaged SAR Measured 0.014 0.074 Averaged S Averag	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 0.724 0.724 0.724 0.724 0.724 0.115 SAR over 1g kg) Reported	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G	Position Bottom Surface Front Edge Front Edge Position Bottom Surface Position Bottom Surface Position Bottom Surface Bottom S	Distance (rmm) 0 0 0 Distance (rmm) Distance (rmm)	CH 1 6 11 1 CH 0 0 CH 42	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2412 2402 2402 2402 240	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 170erance (dBm) 11.50 11.50 11.50 11.50 11.60 11.60 11.60	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.23 16.23 16.33 Measured Avg. Power (dBm) 10.74 10.74 10.74 Measured Avg. Power (dBm) 13.95	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.02 1.302 Duty cycle scaling Duty cycle scaling 1.012	106.91% Power scaling 103.99% 106.41% 106.20% 103.99% Power scaling 119.12% 119.12% Power scaling 101.16%	0.938 Averaged SAR Measured 0.231 0.611 0.624 0.689 Averaged SAR Measured 0.014 0.074 Averaged SAR Measured 0.014 0.074	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 over 1g (W/kg) Reported 0.022 0.115 SAR over 1g kg) Reported 0.182	- ID
Aux Mode WLAN 902.11b WLAN 902.11b WLAN 902.11b WLAN 902.11b Mode Bluetootr(GFSK) Bluetootr(GFSK)	Position Eottom Surface Front Edge Front Edge Position Bottom Surface Front Edge Position	Distance (rmm) 0 0 0 Distance (rmm) 0 Distance (rmm)	CH 1 6 11 1 CH 0 0 CH CH	Freq. (MHz) 2412 2437 2462 2412 2412 (MHz) 2402 2402 2402 2402 2402 2402	8.00 Max Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max Rated Avg. Power + Max. Tolerance (dBm) 11.50 Max Rated Avg. Power + Max. Tolerance (dBm)	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.23 16.23 16.33 Measured Avg. Power (dBm) 10.74 10.74 Measured Avg. Power (dBm)	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302 1.302 Duty cycle scaling Duty cycle	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power scaling Power scaling	0.938 Averaged SAR Measured 0.231 0.611 0.611 0.624 0.689 Averaged SAR Measured 0.014 0.074 Averaged S Averag	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 0.724 0.0724 0.0724 0.115 SAR over 1g kg) Reported 0.182 0.738 over 1g (W/kg)	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Bluetooth(GFSK) Bluetooth(GFSK) Wode	Position Bottom Surface Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Bottom Surface Front Edge	Distance (mm) 0 0 0 Distance (mm) Distance (mm) Distance	CH 1 6 11 1 CH 0 0 0 CH 42 42	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 14.00 Max. Rated Avg. Power + Max.	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.28 16.33 Measured Avg. Power (dBm) 10.74 10.74 10.74 Measured Avg. Power (dBm) 13.95 13.95 Measured Avg. Power	1.016 Duty cycle scaling 1.011 1.011 1.011 Duty cycle scaling 1.011 1.011 Duty cycle scaling 1.302 1.302 Duty cycle scaling 1.016 1.016 Duty cycle	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% 103.99% Power scaling 119.12% 119.12% 119.12% 101.16% Power scaling	0.938 Averaged SAR Measured 0.231 0.6511 0.6514 0.654 0.659 Averaged SAR Measured 0.014 0.074 Averaged SAR 0.074 Averaged SAR 0.074 Averaged SAR 0.077 0.718 Averaged SAR	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 over 1g (W/kg) Reported 0.022 0.115 AR over 1g kg) Reported 0.162 0.738	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G Mode	Position Bottom Surface Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position	Distance (mm) 0 0 0 Distance (mm) Distance (mm) Distance	CH 1 6 11 1 CH 0 0 0 CH 42 42	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 14.00 Max. Rated Avg. Power + Max.	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.28 16.33 Measured Avg. Power (dBm) 10.74 10.74 10.74 Measured Avg. Power (dBm) 13.95 13.95 Measured Avg. Power	1.016 Duty cycle scaling 1.011 1.011 1.011 Duty cycle scaling 1.011 1.011 Duty cycle scaling 1.302 1.302 Duty cycle scaling 1.016 1.016 Duty cycle	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% 108.41% 105.20% 103.99% 119.12% 119.12% 119.12% 101.16% 101.16% 101.16% Power scaling Power scaling	0.938 Averaged SAR Measured 0.231 0.6511 0.6514 0.654 0.659 Averaged SAR Measured 0.014 0.074 Averaged SAR 0.074 Averaged SAR 0.074 Averaged SAR 0.077 0.718 Averaged SAR	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 0.724 0.724 0.724 0.724 0.115 SAR over 1g kg) Reported 0.182 0.738 over 1g (W/kg) Reported	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G	Position Bottom Surface Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Bottom Surface Front Edge	Distance (mm) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CH 1 6 11 1 CH 0 0 CH 42 42 CH CH	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 14.00 Max. Rated Avg. Power + Max. Tolerance (dBm)	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.23 16.23 Measured Avg. Power (dBm) 10.74 10.74 Measured Avg. Power (dBm) 13.95 13.95 Measured Avg. Power (dBm)	1.016 Duty cycle scaling 1.011 1.011 1.011 0.011 1.011 Duty cycle scaling 1.302 Duty cycle scaling 1.016 Duty cycle scaling	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% 103.99% Power scaling 119.12% 119.12% 119.12% 101.16% Power scaling	0.938 Averaged SAR Measured 0.231 0.6611 0.611 0.624 0.669 Averaged SAR Measured 0.014 0.074 Averaged SAR 0.017 0.771 Averaged SAR 0.177 0.7718 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.177 0.171 0.177 0.17 0.1	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 0.724 0.0724 0.0724 0.115 SAR over 1g kg) Reported 0.182 0.738 over 1g (W/kg)	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.2G	Position Bottom Surface Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Bottom Surface Front Edge Bottom Surface Front Edge Bottom Surface Bottom Surfac	Distance (mm) 0 0 0 Distance (mm) 0 0 Distance (mm) 0 0 0 0 Distance	CH 1 6 11 1 CH 0 0 0 CH 42 42 CH CH 58	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50 11.50 11.50 11.50 11.50 11.50 11.4.00 14.00 14.00 14.00 14.00 14.00 14.00 14.00 14.00	7.71 Measured Avg, Power (dBm) 16.33 16.23 16.23 16.35 16.35 17.55 16.35 16.35 16.35 17.55 17	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.012 1.302 1.302 1.016	106.91% Power scaling 103.99% 106.41% 105.20% Power scaling 119.12% 119.12% 101.16% 101.16% 101.16% 101.16% 105.20%	0.938 Averaged SAR Measured 0.231 0.689 Averaged SAR Measured 0.014 0.074 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.171	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 over 1g (W/kg) Reported 0.022 0.115 SAR over 1g kg) Reported 0.738 over 1g (W/kg) Reported 0.182 0.738	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G	Position Bottom Surface Front Edge Front Edge Position Bottom Surface Front Edge	Distance (mm) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CH 1 6 11 1 CH 0 0 0 CH 42 42 42 CH CH 58 58 58 CH	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 7000000000000000000000000000000000000	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.33 Measured Avg. Power (dBm) 10.74 Measured Avg. Power (dBm) 13.95 Measured Avg. Power (dBm) 13.95 Measured Avg. Power (dBm) 13.78 Measured Avg. Power (dBm)	1.016 Duty cycle scaling 1.011 1.011 1.011 Duty cycle scaling 1.302 1.302 Duty cycle scaling 1.016 Duty cycle scaling 1.016 Duty cycle scaling 1.016 Duty cycle scaling 1.018 Duty cycle scaling	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power scaling 119.12% 119.12% 101.16% 101.16% 101.16% 101.16% 105.20% 105.20% 105.20% Power scaling	0.938 Averaged SAR Measured 0.231 0.6611 0.624 0.689 Averaged SAR Measured 0.014 0.074 Averaged SAR 0.017 0.0718 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.171 0.562 Averaged SAR Measured 0.171 0.562	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 over 1g (W/kg) Reported 0.022 0.115 SAR over 1g kg) Reported 0.738 over 1g (W/kg) Reported 0.182 0.183 over 1g (W/kg) Reported 0.183 over 1g (W/kg)	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G	Position Bottom Surface Front Edge Front Edge Front Edge Rostion Bottom Surface Rostion Bottom Surface Rostion Bottom Surface Rostion Bottom Surface Rostion Rosti Rosti Rostion Rostion Rostion Ros	Distance (mm) 0 0 0 Distance (mm) 0 0 0 Distance (mm) 0 0 0 Distance (mm)	CH 1 6 11 1 CH 0 0 0 CH 42 42 42 CH 58 58 58 58 58	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max, Rated Avg, Power + Max, Tolerance (dBm) 16.50 16.50 16.50 16.50 7000000000000000000000000000000000000	7.71 Measured Avg, Power (dBm) 16.33 16.23 16.23 16.33 16.33 Measured Avg, Power (dBm) 10.74 10.74 10.74 Measured Avg, Power (dBm) 13.95 13.95 Measured Avg, Power (dBm) 13.78	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.016	106.91% Power scaling Power scaling Power scaling Power scaling 103.99% Power scaling 101.16% 101.16% 101.16% 101.16% 101.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20%	0.938 Averaged SAR Measured 0.231 0.689 0.689 Averaged SAR Measured 0.014 0.074 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.171 0.562 Averaged SAR Measured 0.206	1.019 over 1g (W/kg) Reported 0.243 0.657 0.654 0.724 over 1g (W/kg) Reported 0.022 0.115 SAR over 1g kg) Reported 0.182 0.738 over 1g (W/kg) Reported 0.183 0.601 over 1g (W/kg)	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G	Position Bottom Surface Front Edge Front Edge Position Bottom Surface Front Edge	Distance (mm) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CH 1 6 11 1 CH 0 0 0 CH 42 42 42 CH CH 58 58 58 CH	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 7000000000000000000000000000000000000	7.71 Measured Avg. Power (dBm) 16.33 16.23 16.33 Measured Avg. Power (dBm) 10.74 Measured Avg. Power (dBm) 13.95 Measured Avg. Power (dBm) 13.95 Measured Avg. Power (dBm) 13.78 Measured Avg. Power (dBm)	1.016 Duty cycle scaling 1.011 1.011 1.011 Duty cycle scaling 1.302 1.302 Duty cycle scaling 1.016 Duty cycle scaling 1.016 Duty cycle scaling 1.016 Duty cycle scaling 1.018 Duty cycle scaling	106.91% Power scaling 103.99% 106.41% 105.20% 103.99% Power scaling 119.12% 119.12% 101.16% 101.16% 101.16% 101.16% 105.20% 105.20% 105.20% Power scaling	0.938 Averaged SAR Measured 0.231 0.6611 0.624 0.689 Averaged SAR Measured 0.014 0.074 Averaged SAR 0.017 0.0718 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.171 0.562 Averaged SAR Measured 0.171 0.562	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 over 1g (W/kg) Reported 0.022 0.115 SAR over 1g kg) Reported 0.738 over 1g (W/kg) Reported 0.182 0.183 over 1g (W/kg) Reported 0.183 over 1g (W/kg)	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Bluetooth(GFSK) WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G	Position Bottom Surface Front Edge Front Edge Front Edge Rostion Bottom Surface Rostion Bottom Surface Rostion Bottom Surface Rostion Bottom Surface Rostion Rosti Rosti Rostion Rostion Rostion Ros	Distance (mm) 0 0 0 Distance (mm) 0 0 0 Distance (mm) 0 0 0 Distance (mm)	CH 1 6 11 1 CH 0 0 0 CH 42 42 42 CH 58 58 58 58 58	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max, Rated Avg, Power + Max, Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max, Rated Avg, Power + Max, Tolerance (dBm) 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.4.00 14.00 14.00 14.00 14.00 14.00 15.00	7.71 Measured Avg, Power (dBm) 16.33 16.23 16.23 16.33 Measured Avg, Power (dBm) 10.74 10.74 10.74 Measured Avg, Power (dBm) 13.95 13.95 Measured Avg, Power (dBm) 13.78 13.78 13.78 13.78	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.016	106.91% Power scaling Power scaling Power scaling Power scaling 103.99% Power scaling 101.16% 101.16% 101.16% 101.16% 101.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20%	0.938 Averaged SAR Measured 0.231 0.689 0.689 Averaged SAR Measured 0.014 0.074 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.171 0.562 Averaged SAR Measured 0.206	1.019 over 1g (W/kg) Reported 0.243 0.657 0.654 0.724 over 1g (W/kg) Reported 0.022 0.115 SAR over 1g kg) Reported 0.182 0.738 over 1g (W/kg) Reported 0.183 0.601 over 1g (W/kg)	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G	Position Bottom Surface Front Edge Front Edge Front Edge Rostion Bottom Surface Rostion Bottom Surface Rostion Bottom Surface Rostion Bottom Surface Rostion Rosti Rosti Rostion Rostion Rostion Ros	Distance (mm) 0 0 0 Distance (mm) 0 0 0 Distance (mm) 0 0 0 Distance (mm)	CH 1 6 11 1 CH 0 0 0 CH 42 42 42 CH 58 58 58 58 58	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max, Rated Avg, Power + Max, Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max, Rated Avg, Power + Max, Tolerance (dBm) 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.4.00 14.00 14.00 14.00 14.00 14.00 15.00	7.71 Measured Avg, Power (dBm) 16.33 16.23 16.23 16.33 Measured Avg, Power (dBm) 10.74 10.74 10.74 Measured Avg, Power (dBm) 13.95 13.95 Measured Avg, Power (dBm) 13.78 13.78 13.78 13.78	1.016 Duty cycle scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.016	106.91% Power scaling Power scaling Power scaling Power scaling 103.99% Power scaling 101.16% 101.16% 101.16% 101.16% 101.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20%	0.938 Averaged SAR Measured 0.231 0.689 0.689 Averaged SAR Measured 0.014 0.074 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.171 0.562 Averaged SAR Measured 0.206	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 over 1g (W/kg) Reported 0.022 0.115 SAR over 1g (W/kg) Reported 0.182 0.738 over 1g (W/kg) Reported 0.183 0.601 over 1g (W/kg) Reported 0.183 0.601 over 1g (W/kg) Reported 0.183 0.601 0.183 0.60 0.183 0.60 0.183 0.60 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.1	- ID
Aux Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G	Position Bottom Surface Front Edge Front Edge Front Edge Rostion Bottom Surface Front Edge Rostin Bottom Sur	Distance (rmm) 0 0 0 0 Distance (rmm) 0 0 Distance (rmm) 0 0 Distance (rmm) 0 0 Distance	CH 1 6 11 1 CH 0 0 0 CH 42 42 42 CH 58 58 58 58 58 58	Freq. (MHz) 2412 2437 2462 2412 2412 2412 2402 2402 2402 2402 240	8.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 14.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 14.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 14.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 15.00 Max. Rated Avg. Power + Max. 15.00	7.71 Measured Avg. Power (dBm) 16.33 16.29 16.20 16.31 Measured Avg. Power (dBm) 10.74 10.74 10.74 10.74 10.74 13.95 13.95 13.95 13.78 13.78 13.78 13.78 14.96 Measured Avg. Power (dBm)	1.016 Duty cycle scaling 1.011 1.011 1.011 Duty cycle scaling 1.302 1.302 Duty cycle scaling 1.016 1.016 1.016 1.016 1.016 Duty cycle scaling Duty cycl	106.91% Power scaing 103.99% 106.41% 105.20% 103.99% Power scaing 119.12% Power scaing 101.18% Power scaing 101.18% Power scaing 105.20% Power scaing 105.20% Power scaing 105.20% 100.33% 100.33% 100.33% Power	0.938 Averaged SAR Measured 0.231 0.624 0.654 0.654 Averaged SAR Measured 0.014 0.074 Averaged SAR Measured 0.177 0.718 Averaged SAR Measured 0.171 0.562 Averaged SAR Measured 0.206 0.740 Averaged SAR	1.019 over 1g (W/kg) Reported 0.243 0.657 0.664 0.724 0.724 0.724 0.724 0.724 0.715 0.115 SAR over 1g Kg) Reported 0.182 0.738 over 1g (W/kg) Reported 0.183 0.601 over 1g (W/kg) Reported 0.183 0.601 0.021 0.759 0.021 0.021 0.759 0.021 0.021 0.021 0.759 0.021 0.021 0.021 0.759 0.021 0.021 0.759 0.021 0.021 0.021 0.759 0.021 0.021 0.021 0.022 0.738 0.021 0.022 0.738 0.021 0.022 0.738 0.021 0.022 0.759 0.021 0.022 0.759 0.021 0.022 0.759 0.021 0.022 0	- ID

* - repeated at the highest SAR measurement according to the KDB 865664 D01

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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Pulse

Main											
					Mary Dated Ave	Manager			Averaged SAR	over 1g (W/kg)	
Mode	Position	Distance	СН	Freq.	Max. Rated Avg. Power + Max.	Measured Avg. Power	Duty cycle	Power	, theraged of a	olor ig (ting)	D
mode	1 0010011	(mm)	0.11	(MHz)	Tolerance (dBm)	(dBm)	scaling	scaling	Measured	Reported	2
									Wedduleu	Reported	
WLAN 802.11b	Bottom Surface	0	6	2437	16.50	16.47	1.011	100.69%	0.325	0.331	-
WLAN 802.11b	Front Edge	0	6	2437	16.50	16.47	1.011	100.69%	0.440	0.448	012
			1								
					Max. Rated Avg.	Measured			Averaged SAR	over 1g (W/kg)	
Mode	Position	Distance	СН	Freq.	Power + Max.	Avg. Power	Duty cycle	Power			D
		(mm)		(MHz)	Tolerance (dBm)	(dBm)	scaling	scaling	Measured	Reported	
									mododrou	Hoponou	
WLAN 802.11n(40M) 5.2G	Front Edge	0	38	5190	11.50	11.49	1.012	100.23%	0.928	0.941	-
WLAN 802.11n(40M) 5.2G	Front Edge*	0	38	5190	11.50	11.49	1.012	100.23%	0.889	0.902	
WLAN 802.11n(40M) 5.2G WLAN 802.11ac(80M) 5.2G	Front Edge Bottom Surface	0	46	5230	11.50 11.50	11.47 11.37	1.012	100.69%	0.903	0.920	
WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G	Front Edge	0	42 42	5210 5210	11.50	11.37	1.016	103.04%	1.030	1.078	013
WLAN 802.11ac(80M) 5.2G	Front Edge*	0	42	5210	11.50	11.37	1.016	103.04%	0.965	1.010	-
		Distance		Freq.	Max. Rated Avg.	Measured	Duty cycle	Power	Averaged SAR	over 1g (W/kg)	
Mode	Position	(mm)	СН	(MHz)	Power + Max.	Avg. Power	scaling	scaling			D
					Tolerance (dBm)	(dBm)	÷	, , , , , , , , , , , , , , , , , , ,	Measured	Reported	
WLAN 802.11n(40M) 5.3G	Front Edge	0	54	5270	12.00	11.69	1.012	107.40%	0.907	0.986	
WLAN 802.11n(40M) 5.3G	Front Edge*	0	54	5270	12.00	11.69	1.012	107.40%	0.879	0.955	
WLAN 802.11n(40M) 5.3G	Front Edge	0	62	5310	12.00	11.63	1.012	108.89%	0.845	0.931	
WLAN 802.11ac(80M) 5.3G	Bottom Surface	0	58	5290	12.00	11.78	1.016	105.20%	0.289	0.309	
WLAN 802.11ac(80M) 5.3G	Front Edge	0	58	5290	12.00	11.78	1.016	105.20%	1.050	1.122	014
WLAN 802.11ac(80M) 5.3G	Front Edge*	0	58	5290	12.00	11.78	1.016	105.20%	0.981	1.048	
					Max. Rated Avg.	Maggired			Averaged SAR	over 1g (W/kg)	
Mode	Position	Distance	СН	Freq.	Max. Rated Avg. Power + Max.	Measured Avg. Power	Duty cycle	Power			D
Wode	1 USIUUT	(mm)	UN UN	(MHz)	Tolerance (dBm)	(dBm)	scaling	scaling	Mar. 1	Dearth	
						(12))			Measured	Reported	
WLAN 802.11ac(80M) 5.6G	Bottom Surface	0	138	5690	9.00	8.96	1.016	100.93%	0.150	0.154	-
WLAN 802.11ac(80M) 5.6G	Front Edge	0	106	5530	9.00	8.74	1.016	106.17%	0.699	0.754	
WLAN 802.11ac(80M) 5.6G	Front Edge	0	122	5610	9.00	8.66	1.016	108.14%	0.873	0.959	-
WLAN 802.11ac(80M) 5.6G	Front Edge	0	138	5690	9.00	8.96	1.016	100.93%	0.981	1.006	015
WLAN 802.11ac(80M) 5.6G	Front Edge*	0	138	5690	9.00	8.96	1.016	100.93%	0.977	1.002	
	1		1						1		
					Max. Rated Avg.	Measured			Averaged SAR	over 1g (W/kg)	
Mode	Position	Distance	СН	Freq.	Power + Max.	Avg. Power	Duty cycle	Power			D
modo	robiaon	(mm)	011	(MHz)	Tolerance (dBm)	(dBm)	scaling	scaling	Measured	Reported	5
									Wedduleu	Reported	
WLAN 802.11n(40M) 5.8G	Front Edge	0	151	5755	8.00	7.98	1.012	100.46%	0.697	0.709	
WLAN 802.11ac(80M) 5.8G	Bottom Surface	0	155	5775	8.00	7.71	1.016	106.91%	0.117	0.127	
WLAN 802.11ac(80M) 5.8G	Front Edge	0	155	5775	8.00	7.71	1.016	106.91%	0.967	1.050	016
WLAN 802.11ac(80M) 5.8G	Front Edge*	0	155	5775	8.00	7.71	1.016	106.91%	0.914	0.993	
Aux											
Aux		Distance		5	Max. Rated Avg.	Measured	Determine	Denner	Averaged SAR	over 1g (W/kg)	
Mode	Position	Distance (mm)	СН	Freq.	Max. Rated Avg. Power + Max.	Avg. Power	Duty cycle	Power	Averaged SAR	over 1g (W/kg)	D
	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR Measured		D
Mode		(mm)		(MHz)	Power + Max. Tolerance (dBm)	Avg. Power (dBm)	scaling	scaling	Measured	Reported	D
Mode WLAN 802.11b	Bottom Surface	(mm) 0	1	(MHz) 2412	Power + Max. Tolerance (dBm) 16.50	Avg. Power (dBm) 16.33	scaling 1.011	scaling 103.99%	Measured 0.156	Reported 0.164	-
Mode WLAN 802.11b WLAN 802.11b	Bottom Surface Front Edge	(mm) 0 0	1	(MHz) 2412 2412	Power + Max. Tolerance (dBm) 16.50 16.50	Avg. Power (dBm) 16.33 16.33	scaling 1.011 1.011	scaling 103.99% 103.99%	Measured 0.156 0.668	Reported 0.164 0.702	- D
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b	Bottom Surface Front Edge Front Edge	(mm) 0 0 0	1 1 6	(MHz) 2412 2412 2437	Power + Max. Tolerance (dBm) 16.50 16.50 16.50	Avg. Power (dBm) <u>16.33</u> 16.23	scaling 1.011 1.011 1.011	scaling 103.99% 103.99% 106.41%	Measured 0.156 0.668 0.615	Reported 0.164 0.702 0.662	-
Mode WLAN 802.11b WLAN 802.11b	Bottom Surface Front Edge	(mm) 0 0	1	(MHz) 2412 2412	Power + Max. Tolerance (dBm) 16.50 16.50	Avg. Power (dBm) 16.33 16.33	scaling 1.011 1.011	scaling 103.99% 103.99%	Measured 0.156 0.668	Reported 0.164 0.702	-
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b	Bottom Surface Front Edge Front Edge	(mm) 0 0 0	1 1 6	(MHz) 2412 2412 2437	Power + Max. Tolerance (dBm) 16.50 16.50 16.50	Avg. Power (dBm) <u>16.33</u> 16.23	scaling 1.011 1.011 1.011	scaling 103.99% 103.99% 106.41%	Measured 0.156 0.668 0.615 0.633	Reported 0.164 0.702 0.662 0.673	-
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b	Bottom Surface Front Edge Front Edge Front Edge	(mm) 0 0 0 0	1 1 6 11	(MH2) 2412 2412 2437 2462	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 Max. Rated Avg.	Avg. Power (dBm) 16.33 16.33 16.23 16.28 Measured	scaling 1.011 1.011 1.011 1.011	scaling 103.99% 103.99% 106.41% 105.20%	Measured 0.156 0.668 0.615 0.633	Reported 0.164 0.702 0.662	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b	Bottom Surface Front Edge Front Edge	(mm) 0 0 0 Distance	1 1 6	(MHz) 2412 2412 2437 2462 Freq.	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 Max. Rated Avg. Power + Max.	Avg. Power (dBm) 16.33 16.33 16.23 16.28 Measured Avg. Power	scaling 1.011 1.011 1.011 1.011 Duty cycle	scaling 103.99% 103.99% 106.41% 105.20% Power	Measured 0.156 0.668 0.615 0.633	Reported 0.164 0.702 0.662 0.673	-
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b	Bottom Surface Front Edge Front Edge Front Edge	(mm) 0 0 0 0	1 1 6 11	(MH2) 2412 2412 2437 2462	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 Max. Rated Avg.	Avg. Power (dBm) 16.33 16.33 16.23 16.28 Measured	scaling 1.011 1.011 1.011 1.011	scaling 103.99% 103.99% 106.41% 105.20%	Measured 0.156 0.668 0.615 0.633	Reported 0.164 0.702 0.662 0.673	- 017 -
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode	Bottom Surface Front Edge Front Edge Front Edge Position	(mm) 0 0 0 Distance (mm)	1 6 11 CH	(MHz) 2412 2437 2462 Freq. (MHz)	Power + Max, Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50	Avg. Power (dBm) 16.33 16.23 16.23 16.28 Measured Avg. Power (dBm)	scaling 1.011 1.011 1.011 1.011 Duty cycle scaling	scaling 103.99% 103.99% 106.41% 105.20% Power scaling	Measured 0.156 0.668 0.615 0.633 Averaged SAR Measured	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported	- 017 -
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK)	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface	(mm) 0 0 0 Distance (mm) 0	1 6 11 CH	(MHz) 2412 2437 2462 Freq. (MHz) 2402	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50	Avg. Power (dBm) <u>16.33</u> 16.23 16.23 16.28 Measured Avg. Power (dBm) 10.74	scaling 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12%	Measured 0.156 0.668 0.615 0.633 Averaged SAR Measured 0.028	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043	. ID
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode	Bottom Surface Front Edge Front Edge Front Edge Position	(mm) 0 0 0 Distance (mm)	1 6 11 CH	(MHz) 2412 2437 2462 Freq. (MHz)	Power + Max, Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50	Avg. Power (dBm) 16.33 16.23 16.23 16.28 Measured Avg. Power (dBm)	scaling 1.011 1.011 1.011 1.011 Duty cycle scaling	scaling 103.99% 103.99% 106.41% 105.20% Power scaling	Measured 0.156 0.668 0.615 0.633 Averaged SAR Measured	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported	- 017 - -
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK)	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface	(mm) 0 0 0 Distance (mm) 0	1 6 11 CH	(MHz) 2412 2437 2462 Freq. (MHz) 2402	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50	Avg. Power (dBm) <u>16.33</u> 16.23 16.23 16.28 Measured Avg. Power (dBm) 10.74	scaling 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12%	Measured 0.156 0.668 0.615 0.615 0.633	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119	017
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK)	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface	(mm) 0 0 0 Distance (mm) 0 0	1 6 11 CH	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2402	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50	Avg. Power (dBm) 16.33 16.33 16.23 16.28 Measured Avg. Power (dBm) 10.74 10.74	scaling 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302 1.302	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12% 119.12%	Measured 0.156 0.668 0.615 0.633 Averaged SAF Measured 0.028 0.077 Averaged SAF 0.028	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g	017
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK)	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface	(mm) 0 0 0 Distance (mm) 0 0 Distance	1 6 11 CH	(MHz) 2412 2413 2437 2462 Freq. (MHz) 2402 2402 Freq.	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50 11.50 Max. Rated Avg. Power + Max.	Avg. Power (dBm) 16.33 16.23 16.23 16.28 Measured Avg. Power (dBm) 10.74 10.74 10.74 4vg. Power	scaling 1.011 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302 1.302 Duty cycle	scaling 103.99% 106.41% 105.20% Power scaling 119.12% 119.12% Power	Measured 0.156 0.668 0.615 0.633 Averaged SAF Measured 0.028 0.077 Averaged SAF 0.028	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119	017
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK)	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface Front Edge	(mm) 0 0 0 Distance (mm) 0 0	1 6 11 CH 0 0	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2402	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 Max.Rated Avg. Power + Max. Tolerance (dBm) 11.50 11.50	Avg. Power (dBm) 16.33 16.33 16.23 16.28 Measured Avg. Power (dBm) 10.74 10.74	scaling 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302 1.302	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12% 119.12%	Measured 0.156 0.668 0.615 0.633 Averaged SAF Measured 0.028 0.077 Averaged SAF 0.028	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g (kg)	017
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Biuetooth(GFSK) Biuetooth(GFSK) Biuetooth(GFSK) Mode Mode	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface Front Edge	(mm) 0 0 0 Distance (mm) Distance (mm)	1 1 6 11 CH 0 0 CH	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2402 2402 Freq. (MHz)	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50 Max. Rated Avg. Power + Max. Tolerance (dBm)	Avg, Power (dBm) 16.33 16.23 16.23 16.23 Measured Avg, Power (dBm) 10.74 10.74 Measured Avg, Power (dBm)	scaling 1.011 1.011 1.011 1.011 Duty cycle scaling Duty cycle scaling	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12% Power scaling	Measured 0.156 0.668 0.615 0.633 Averaged SAR 0.028 0.027 Averaged SAR Weasured	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g kg)	017
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface Position Bottom Surface Position Bottom Surface	(mm) 0 0 0 Distance (mm) Distance (mm) 0	1 1 6 11 CH 0 0 CH CH	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2510 251	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 11.50	Avg. Power (dBm) 16.33 16.23 16.23 16.28 Measured Avg. Power (dBm) 10.74 10.74 10.74 10.74 10.74	scaling 1.011 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302 Duty cycle scaling Duty cycle scaling 1.012	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12% 119.12% Power scaling 101.16%	Measured 0.156 0.668 0.815 0.833 Averaged SAF 0.028 0.077 Averaged SAF Weasured 0.157	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g Reported 0.161	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Biuetooth(GFSK) Biuetooth(GFSK) Biuetooth(GFSK) Mode Mode	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface Front Edge	(mm) 0 0 0 Distance (mm) Distance (mm)	1 1 6 11 CH 0 0 CH	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2402 2402 Freq. (MHz)	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 11.50 Max. Rated Avg. Power + Max. Tolerance (dBm)	Avg, Power (dBm) 16.33 16.23 16.23 16.23 Measured Avg, Power (dBm) 10.74 10.74 Measured Avg, Power (dBm)	scaling 1.011 1.011 1.011 1.011 Duty cycle scaling Duty cycle scaling	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12% Power scaling	Measured 0.156 0.668 0.615 0.633 Averaged SAR 0.028 0.027 Averaged SAR Weasured	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g kg) Reported	017
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G	Bottom Surface Front Edge Front Edge Front Edge Front Edge Position Bottom Surface Position Bottom Surface	(mm) 0 0 0 Distance (mm) Distance (mm) 0	1 1 6 11 CH 0 0 CH CH	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2510 251	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.40	Avg. Power (dBm) 16.33 16.23 16.23 16.28 Measured Avg. Power (dBm) 10.74 10.74 10.74 10.74 10.74	scaling 1.011 1.011 1.011 1.011 1.011 Duty cycle scaling 1.302 Duty cycle scaling Duty cycle scaling 1.012	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12% 119.12% Power scaling 101.16%	Measured 0.156 0.668 0.615 0.633 . Averaged SAF Measured 0.028 0.077 Averaged SAF Measured 0.077 Averaged SAF 0.028 0.077 0.077 0.077 0.077 0.077 0.077 0.077 0.077 0.077	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g (kg) Reported 0.161 0.640	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G	Bottom Surface Front Edge Front Edge Front Edge Front Edge Position Bottom Surface Position Bottom Surface	(mm) 0 0 0 Distance (mm) 0 Distance (mm) 0 0 0 0	1 1 6 11 CH 0 0 CH CH	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2402 2402 2402 5210 5210	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 11.50 11.50 Max. Rated Avg. Power + Max. Tolerance (dBm) 14.00 14.00	Avg. Power (dBm) 16.33 16.23 16.23 16.28 Measured Avg. Power (dBm) 10.74 10.74 Measured Avg. Power (dBm) 13.95	scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.302 1.302 1.302 Duty cycle scaling Duty cycle scaling 1.016 1.016	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12% 119.12% 119.12% 101.16%	Measured 0.156 0.668 0.615 0.633 . Averaged SAF Measured 0.028 0.077 Averaged SAF Measured 0.077 Averaged SAF 0.028 0.077 0.077 0.077 0.077 0.077 0.077 0.077 0.077 0.077	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g Reported 0.161	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G	Bottom Surface Front Edge Front Edge Front Edge Front Edge Position Bottom Surface Position Bottom Surface	(mm)	1 1 6 11 CH 0 0 CH CH	(MHz) 2412 2417 2437 2462 2462 Freq. (MHz) 2402 2402 2402 2402 2402 5210 5210 5210 Freq.	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.50 11.40	Avg. Power (dBm) 16.33 16.23 16.23 16.28 Measured Avg. Power (dBm) 10.74 10.74 10.74 10.74 10.74	scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.022 1.302 1.302 1.302 1.302 1.302 1.302 1.302 Duty cycle scaling 1.016 1.016 1.016 1.016 1.016 1.017 1.022 1.302 1.002 1.016 1.016 1.017 1.017 1.017 1.017 1.017 1.017 1.022 1.022 1.016 1.016 1.016 1.017 1.017 1.017 1.017 1.017 1.022 1.017 1.016 1	scaling 103.99% 103.99% 106.41% 106.20% Power scaling 119.12% 119.12% 119.12% 101.16% 101.16% 101.16%	Measured 0.156 0.668 0.615 0.633 . Averaged SAF Measured 0.028 0.077 Averaged SAF Measured 0.077 Averaged SAF 0.028 0.077 0.077 0.077 0.077 0.077 0.077 0.077 0.077 0.077	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g (kg) Reported 0.161 0.640	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge	(mm) 0 0 0 Distance (mm) 0 Distance (mm) 0 0 0 0	1 1 6 11 CH 0 0 0 CH CH 42 42	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2402 2402 2402 5210 5210	Power + Max. Tolerance (dBm) 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 11:50 11:50 11:50 Max Rated Avg. POwer + Max. Tolerance (dBm) 14:00 14:00 Max Rated Avg.	Avg. Power (dBm) 16.33 16.23 16.23 16.23 16.28 Measured Avg. Power (dBm) 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.95 11.95	scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.302 1.302 1.302 Duty cycle scaling Duty cycle scaling 1.016 1.016	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 119.12% 119.12% 119.12% 101.16%	Measured 0.156 0.669 0.615 0.615 0.633 Measured 0.028 0.027 Averaged SAR (W Measured 0.157 0.623 Averaged SAR	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g Reported 0.161 0.640	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G Mode	Bottom Surface Front Edge Front Edge Pront Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface Prosition Bottom Surface Position	(mm) 0 0 0 Distance (mm) 0 0 Distance (mm) Distance	1 1 6 11 CH 0 0 0 CH 42 42 CH CH	(MHz) 2412 2412 2437 2482 Freq. (MHz) 2402 2402 2402 2402 5210 5210 5210 Freq. (MHz)	Power + Max. Tolerance (dBm) 16.50 17.50 1	Avg. Power (dBm) 16.33 16.24 16.27 17.27 1	scaling 1011 1011 1011 1011 1011 1011 1011 1011 1011 1012 1002 Scaling 1016 1016 1016 Duty cycle scaling	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 101.16% 101.16% Power scaling	Measured 0.156 0.068 0.015 0.033 Averaged SAR Measured 0.028 0.077 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured	Reported 0.164 0.702 0.662 0.673 cover 1g (W/kg) Reported 0.043 0.119 SAR over 1g %g) Reported 0.161 0.640 over 1g (W/kg)	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) WLAN 802.11ac(80M) 5.2G Wode WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.3G	Bottom Surface Front Edge Front Edge Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface	(mm) 0 0 0 0 0 Distance (mm) 0 Distance (mm) 0 Distance (mm) 0 0 0 0 Distance 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 6 11 CH 0 0 0 CH 42 42 CH CH 58	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2510 5210 5210 5210 5210 5210 5220	Power + Max. Tolerance (dBm) 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 11:50 11:50 11:50 11:50 11:50 11:400 14:00 14:00 14:00 14:00 14:00 14:00	Avg. Power (dBm) 16.33 16.23 16.23 16.23 16.23 16.23 16.24 Measured Avg. Power (dBm) 10.74 10.74 10.74 Measured Avg. Power (dBm) 13.95 13.95 Measured Avg. Power (dBm) 13.78	scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.302 1.302 1.302 Duty cycle scaling 1.016 1.016	scaling 103.99% 103.99% 106.41% 106.20% Power scaling 119.12% 119.12% 119.12% 119.12% 119.12% 101.16% 101.16% 101.16% 101.16% 105.20%	Measured 0.156 0.669 0.615 0.615 0.633 Measured 0.028 0.027 Averaged SAR (W Measured 0.157 0.623 Averaged SAR	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g (kg) Reported 0.161 0.640 over 1g (W/kg)	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G Mode	Bottom Surface Front Edge Front Edge Pront Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface Prosition Bottom Surface Position	(mm) 0 0 0 Distance (mm) 0 0 Distance (mm) Distance	1 1 6 11 CH 0 0 0 CH 42 42 CH	(MHz) 2412 2412 2437 2482 Freq. (MHz) 2402 2402 2402 2402 5210 5210 5210 Freq. (MHz)	Power + Max. Tolerance (dBm) 16.50 17.50 1	Avg. Power (dBm) 16.33 16.24 16.27 17.27 1	scaling 1011 1011 1011 1011 1011 1011 1011 1011 1011 1012 1002 Scaling 1016 1016 1016 Duty cycle scaling	scaling 103.99% 103.99% 106.41% 105.20% Power scaling 101.16% 101.16% Power scaling	Measured 0.156 0.068 0.015 0.033 Averaged SAR Measured 0.028 0.077 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured	Reported 0.164 0.702 0.662 0.673 cover 1g (W/kg) Reported 0.043 0.119 SAR over 1g %g) Reported 0.161 0.640 over 1g (W/kg)	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) WLAN 802.11ac(80M) 5.2G Wode WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.3G	Bottom Surface Front Edge Front Edge Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface	(mm) 0 0 0 0 0 Distance (mm) 0 Distance (mm) 0 Distance (mm) 0 0 0 0 Distance 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 6 11 CH 0 0 0 CH 42 42 CH CH 58	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2510 5210 5210 5210 5210 5210 5220	Power + Max. Tolerance (dBm) 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 11:50 11:50 11:50 11:50 11:50 11:400 14:00 14:00 14:00 14:00 14:00 14:00	Avg. Power (dBm) 16.33 16.23 16.23 16.23 16.23 16.23 16.24 Measured Avg. Power (dBm) 10.74 10.74 10.74 Measured Avg. Power (dBm) 13.95 13.95 Measured Avg. Power (dBm) 13.78	scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.302 1.302 1.302 Duty cycle scaling 1.016 1.016	scaling 103.99% 103.99% 106.41% 106.20% Power scaling 119.12% 119.12% 119.12% 119.12% 119.12% 101.16% 101.16% 101.16% 101.16% 105.20%	Measured 0.156 0.068 0.015 0.033 Averaged SAR Measured 0.028 0.077 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g (kg) Reported 0.161 0.640 over 1g (W/kg)	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) WLAN 802.11ac(80M) 5.2G Wode WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.3G	Bottom Surface Front Edge Front Edge Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface	(mm)	1 1 6 11 CH 0 0 0 CH 42 42 CH CH 58	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2510 5210 5220 5290 5290	Power + Max. Tolerance (dBm) 16.50 1	Avg. Power (dBm) 16.33 16.24 16.27 17.27 1	scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.02 1.302 1.302 1.302 Duty cycle scaling 1.016 1.016 1.016 1.016	scaling 103.99% 103.99% 106.41% 106.20% Power scaling 119.12% 119.12% 119.12% 119.12% 101.16% 101.16% 101.16% 105.20% 105.20%	Measured 0.156 0.668 0.615 0.633 . Averaged SAR Measured 0.028 0.0277 Averaged SAR Averaged SAR 0.027 Averaged SAR 0.028 0.028 0.0277 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.0276	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g (kg) Reported 0.161 0.640 over 1g (W/kg)	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) WLAN 802.11ac(80M) 5.2G Wode WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.3G	Bottom Surface Front Edge Front Edge Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface	(mm)	1 1 6 11 CH 0 0 0 CH 42 42 CH CH 58	(MHz) 2412 2417 2437 2462 2462 Freq. (MHz) 2402 2402 2402 2402 2402 2402 5210 5210 5210 5210 5210 5290 5290 5290	Power + Max. Tolerance (dBm) 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 16:50 11:50 11:50 11:50 11:50 11:50 11:400 14:00 14:00 14:00 14:00 14:00 14:00	Avg. Power (dBm) 16.33 16.33 16.33 16.23 16.23 16.23 16.24 Measured Avg. Power (dBm) 10.74 Measured Avg. Power (dBm) 13.95 Measured Avg. Power (dBm) 13.78 13.78 Massured Avg. Power	scaling 1011 1011 1011 1011 1011 1011 1011 1011 1012 1002 1002 1002 1016 1016 1016 1016 1016 1016	scaling 103.99% 103.99% 106.41% 106.20% Power scaling 119.12% 119.12% 119.12% 101.16% 101.16% 101.16% 101.16% 101.6% 105.20% 105.20% 105.20%	Measured 0.156 0.668 0.615 0.633 Averaged SAR Measured 0.028 0.0277 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.100 0.276	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g kg) oeta 0.640 over 1g (W/kg) Reported 0.161 0.640 over 1g (W/kg) Reported 0.107 0.295	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge Position Bottom Surface Front Edge	(mm)	1 1 6 11 CH 0 0 0 CH 42 42 42 CH CH 58 58	(MHz) 2412 2412 2437 2462 Freq. (MHz) 2402 2510 5210 5220 5290 5290	Power + Max. Tolerance (dBm) 16:50 11:50 1	Avg. Power (dBm) 16.33 16.24 16.27 17.27 1	scaling 1.011 1.011 1.011 1.011 1.011 1.011 1.011 1.02 1.302 1.302 1.302 Duty cycle scaling 1.016 1.016 1.016 1.016	scaling 103.99% 103.99% 106.41% 106.20% Power scaling 119.12% 119.12% 119.12% 119.12% 101.16% 101.16% 101.16% 105.20% 105.20%	Measured 0.156 0.668 0.615 0.633 Averaged SAR Measured 0.028 0.0277 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.100 0.276	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g Reported 0.640 over 1g (W/kg) Reported 0.161 0.640 over 1g (W/kg) Reported over 1g (W/kg)	. ID
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G Mode	Bottom Surface Front Edge Front Edge Pront Edge Position Bottom Surface Front Edge Position	(mm) 0 0 0 Distance (mm) 0 0 Distance (mm) 0 0 Distance (mm)	1 1 6 11 CH 0 0 0 CH 42 42 CH 58 58 58 CH	(MHz) 2412 2412 2417 2437 2462 Freq. (MHz) 2402 2402 2402 2402 2402 2402 2402 2402 5210 5210 5210 5210 5220 5290 5290 Freq. (MHz)	Power + Max. Tolerance (dBm) 16.50 1	Avg. Power (dBm) 16.33 16.23 10.74 10.74 10.74 10.74 13.95 13.95 13.95 13.95 13.35 13.78 13.78 13.78 13.78 13.78	scaling 1011 1011 1011 1011 1011 1011 1011 1011 1011 1011 1011 1011 1012 Duty cycle scaling 1.016 Duty cycle scaling 1.016 Duty cycle scaling 1.016 Duty cycle	scaling 103.99% 103.99% 106.41% 106.20% Power scaling 119.12% 119.12% 119.12% 101.16% Power scaling 101.16% 101.16% Power scaling 105.20% 105.20% Power scaling	Measured 0.156 0.615 0.633 Averaged SAR Measured 0.028 0.077 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.100 0.276 Averaged SAR	Reported 0.164 0.702 0.662 0.673 cover 1g (W/kg) Reported 0.043 0.119 SAR over 1g %g) Reported 0.161 0.640 over 1g (W/kg) Reported 0.161 0.640 over 1g (W/kg) Reported 0.107 0.295 over 1g (W/kg)	. ID
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Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.6G	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface Front Edge Position	(mm)	1 1 6 11 CH 0 0 CH 42 42 CH 58 58 CH 138 138 CH 151	(MHz) 2412 2417 2417 2417 2417 2417 2417 2417 2417 2417 2402 2402 2402 2402 2402 2402 2402 2402 5210 5210 5210 5210 5210 5210 5210 5210 5290 5290 5290 5290 5690 5690 5690 5755 5755	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 11.50 11.50 11.50 11.50 11.50 11.50 14.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 14.00 14.00 14.00 14.00 14.00 15.00 15.00 Max. Rated Avg. Power + Max. Tolerance (dBm) 15.00 15.00	Avg. Power (dBm) 16.33 16.24 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.35 13.95 13.95 13.95 13.76 13.76 13.76 13.76 13.76 14.37 14.96 15.45 15.45	scaling 1011 1011 1011 1011 1011 1011 1011 1	scaling 103.99% 103.99% 104.1% 106.20% Power scaling 119.12% 119.12% 119.12% 101.16% Power scaling 101.16% Power scaling 105.20% 105.20% Power scaling 106.10% Power scaling 106.10% Power scaling 107.10% Power scaling 106.20% Power scaling 106.20% Power scaling 106.20% Power scaling 106.20% Power scaling 106.20% Power scaling 106.20% Power scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power	Measured 0.156 0.615 0.615 0.615 0.633 Averaged SAR 0.028 0.027 Averaged SAR 0.653 Averaged SAR 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.100 0.276 Averaged SAR Measured 0.100 0.276 Averaged SAR Measured 0.191 0.607 Averaged SAR Measured 0.191 0.607 Averaged SAR Measured 0.191 0.607 Averaged SAR Measured 0.7978	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g kg) Reported 0.161 0.640 over 1g (W/kg) Reported 0.107 0.295 over 1g (W/kg) Reported 0.196 0.522 over 1g (W/kg) Reported 0.196 0.522 over 1g (W/kg)	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.6G	Bottom Surface Front Edge Front Edge Position Bottom Surface Front Edge Position	(mm)	1 1 6 11 CH 0 0 0 CH 42 42 42 CH CH 58 58 58 CH 138 138 138 138 138 138 138 151 151 151	(MHz) 2412 2413 2415 2457 2462 Freq. (MHz) 2402 2590 2580 25755 57755 57755	Power + Max. Tolerance (dBm) 16:50 16:50 16:50 18:50 18:50 18:50 11:50 11:50 11:50 11:50 14:00 14:00 14:00 14:00 14:00 14:00 14:00 14:00 14:00 14:00 14:00 15:00 15:50 15:50	Avg. Power (dBm) (dEm) (dBm) 16.33 16.33 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 10.74 Measured Avg. Power (dBm) 13.78 13.78 13.78 13.78 Measured Avg. Power (dBm) 14.96 14.96 Measured Avg. Power (dBm) 15.45 15.45	scaling 1011 1011 1011 1011 1011 1011 1011 10	scaling 103.99% 103.99% 106.41% 106.41% 105.20% 105.20% 119.12% 119.12% 119.12% 119.12% 119.12% 101.16% 101.16% 100.93% 100	Measured 0.156 0.668 0.615 0.633 Averaged SAF Measured 0.028 0.077 Averaged 10,077 Averaged 3AF Measured 0.157 0.623 Averaged SAF Measured 0.157 0.623 Averaged SAF Measured 0.100 0.276 Averaged SAF Measured 0.191 0.607 Averaged SAF Measured 0.191 0.807	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 AR over 1g (W/kg) Reported 0.640 over 1g (W/kg) Reported 0.161 0.640 over 1g (W/kg) Reported 0.107 0.295 over 1g (W/kg) Reported 0.196 0.622 over 1g (W/kg) Reported 0.196 0.622 over 1g (W/kg)	
Mode WLAN 802.11b Mode Biuetooth(GFSK) Biuetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.3G WUAN 802.11ac(80M) 5.3G WUAN 802.11ac(80M) 5.8G WUAN 802.11ac(80M) 5.8G WLAN 802.11ac(80M) 5.8G	Bottom Surface Front Edge Front Edge Front Edge Position Bottom Surface Front Edge Bottom Surface	(mm)	1 1 6 11 CH 0 0 0 CH 42 42 42 CH 58 58 58 CH 138 138 138 CH 151 151 155	(MHz) 2412 2412 2412 2437 2462 2462 2462 2462 2462 2402 2402 2402 2402 2402 2402 2402 2402 5210 5210 5210 5210 5210 5210 5210 5220 5290 5290 5290 5290 5690 5690 5690 5690 5755 5755 5755 5775	Power + Max. Tolerance (dBm) 16.50 16.50 16.50 16.50 16.50 16.50 16.50 16.50 11.50 11.50 11.50 14.00 14.00 14.00 14.00 14.00 14.00 14.00 14.00 14.00 14.00 15.00 15.00 15.50 15.50	Avg. Power (dBm) 16.33 16.24 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.74 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.35 10.37 10.35 10.37 10.37 10.37 10.35 10.37 10.37 10.35 10.37 10.37 10.37 10.35 10.37 10.37 10.37 10.37 10.35 10.37 10.37 10.37 10.37 10.37 10.37 10.35 10.37 10.37 10.37 10.35 10.37 10.37 10.37 10.35 10.37 10.37 10.37 10.35 10.37 10.37 10.35 10.37 10.37 10.37 10.35 10.37 10.37 10.37 10.35 10.35 10.37 1	scaling 1011 1011 1011 1011 1011 1011 1011 1	scaling 103.99% 103.99% 103.99% 104.1% 105.20% Power scaling 119.12% 119.12% 119.12% 119.12% 101.16% 101.16% 101.16% 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 105.20% Power scaling 106.20% Power scaling 107.16% 108.20% Power scaling 108.20% Power scaling 109.30% Power scaling 109.30% Power scaling 100.33% Power scaling 101.16% Power scaling 101.16% Power scaling 101.16% Power scaling 101.16% Power scaling 101.16% Power scaling 101.16% Power scaling 101.16% Power scaling 100.33% Power scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Scaling Power Power Scaling Power	Measured 0.156 0.615 0.615 0.633 Averaged SAR Measured 0.028 0.027 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.157 0.623 Averaged SAR Measured 0.100 0.276 Averaged SAR Measured 0.100 0.276 Averaged SAR Measured 0.191 0.607 Averaged SAR Measured 0.191 0.607 Averaged SAR Measured 0.191 0.507 Averaged SAR Measured 0.191 0.7978 1.070 0.978 1.020	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 SAR over 1g kg) Reported 0.161 0.640 over 1g (W/kg) Reported 0.107 0.295 over 1g (W/kg) Reported 0.196 0.622 over 1g (W/kg) Reported 0.196 0.622 over 1g (W/kg) Reported 0.196 0.522 over 1g (W/kg)	
Mode WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b WLAN 802.11b Mode Bluetooth(GFSK) Bluetooth(GFSK) Bluetooth(GFSK) Mode WLAN 802.11ac(80M) 5.2G WLAN 802.11ac(80M) 5.2G Mode WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.3G WLAN 802.11ac(80M) 5.6G	Bottom Surface Front Edge Front Edge Position Bottom Surface Front Edge Position	(mm)	1 1 6 11 CH 0 0 0 CH 42 42 42 CH CH 58 58 58 CH 138 138 138 138 138 138 138 151 151 151	(MHz) 2412 2413 2415 2457 2462 Freq. (MHz) 2402 2590 2580 25755 57755 57755	Power + Max. Tolerance (dBm) 16:50 16:50 16:50 18:50 18:50 18:50 11:50 11:50 11:50 11:50 14:00 14:00 14:00 14:00 14:00 14:00 14:00 14:00 14:00 14:00 14:00 15:00 15:50 15:50	Avg. Power (dBm) (dEm) (dBm) 16.33 16.33 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 16.23 10.74 Measured Avg. Power (dBm) 13.78 13.78 13.78 13.78 Measured Avg. Power (dBm) 14.96 14.96 Measured Avg. Power (dBm) 15.45 15.45	scaling 1011 1011 1011 1011 1011 1011 1011 10	scaling 103.99% 103.99% 106.41% 106.41% 105.20% 105.20% 119.12% 119.12% 119.12% 119.12% 119.12% 101.16% 101.16% 100.93% 100	Measured 0.156 0.668 0.615 0.633 Averaged SAF Measured 0.028 0.077 Averaged 10,077 Averaged 3AF Measured 0.157 0.623 Averaged SAF Measured 0.157 0.623 Averaged SAF Measured 0.100 0.276 Averaged SAF Measured 0.191 0.607 Averaged SAF Measured 0.191 0.807	Reported 0.164 0.702 0.662 0.673 over 1g (W/kg) Reported 0.043 0.119 AR over 1g (W/kg) Reported 0.640 over 1g (W/kg) Reported 0.161 0.640 over 1g (W/kg) Reported 0.107 0.295 over 1g (W/kg) Reported 0.196 0.622 over 1g (W/kg) Reported 0.196 0.622 over 1g (W/kg)	

* - repeated at the highest SAR measurement according to the KDB 865664 D01

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Note:

Scaling = $\frac{\text{reported SAR}}{\text{measured SAR}} = \frac{P2(mW)}{P1(mW)} = 10^{\left(\frac{P2-P1}{10}\right)(dBm)}$ Reported SAR = measured SAR * (scaling)

Where P2 is maximum specified power, P1 is measured conducted power

2.3 Reporting statements of conformity

The conformity statement in this report is based solely on the test results, measurement uncertainty is excluded.

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3. Simultaneous Transmission Analysis

Simultaneous Transmission Scenarios:

Simultaneous Transmit Configurations	Body
WLAN 2.4GHz Main + WLAN 2.4GHz Aux	Yes
WLAN 2.4GHz Main + BT Aux	Yes
WLAN 2.4GHz Main + WLAN 2.4GHz Aux + BT Aux	Yes
WLAN 5GHz Main + WLAN 5GHz Aux	Yes
WLAN 5GHz Main + BT Aux	Yes
WLAN 5GHz Main + WLAN 5GHz Aux + BT Aux	Yes

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3.1 Estimated SAR calculation

According to KDB447498 D01v06 – When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

Estimated SAR = $\frac{\text{Max. tune up power (mW)}}{\text{Min. test separation distance(mm)}} \times \frac{\sqrt{f(\text{GHz})}}{7.5}$

If the minimum test separation distance is < 5mm, a distance of 5mm is used for estimated SAR calculation. When the test separation distance is >50mm, the 0.4W/kg is used for SAR-1q.

3.2 SPLSR evaluation and analysis

Per KDB447498D01, when the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR sum to peak location separation ratio(SPLSR).

The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion.

The ratio is determined by (SAR1 + SAR2)^1.5/Ri, rounded to two decimal digits, and must be \leq 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

SAR1 and SAR2 are the highest reported or estimated SAR for each antenna in the pair, and Ri is the separation distance between the peak SAR locations for the antenna pair in mm.

When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna.

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High-tek

		Reported SAR					Scenario1	Scenario2	Scenario3	Scenario4	Scenario5	Scenario6
		1	2	3	4	5	1+2	1+5	1+2+5	3+4	3+5	3+4+5
Exposure Posi	tion	2.4GHz WLAN Main	2.4GHz WLAN Aux	5GHz WLAN Main	5GHz WLAN Aux	Bluetooth Aux	Summed	Summed	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)					
Bottom Surface	0	0.633	0.243	0.251	0.217	0.022	0.876	0.655	0.898	0.468	0.273	0.490
Front Edge	0	0.472	0.724	1.067	0.759	0.115	1.196	0.587	1.311	1.826	1.182	1.941

			S	cenario:3+4-	+5				
Position	Conditions	SAR Value	Co	oordinates (n	nm)	ΣSAR	Peak Location	SPLSR	Simultaneous Transmission SAR
	Conditiono	(W/kg)	х	у	z	(W/kg)	Separation Distance (mm)		Test
Front Edge	WLAN 5G Main	1.067	-5.20	80.80	-177.00	-	-	-	-
FIONEEdge	WLAN5G Aux + BT Aux	0.874	-2.80	-84.20	-177.00	1.941	165.02	0.016	SPLSR ≤ 0.04, Not required
		5G Main		165.0g 2	mm 13.82m		S Aux	BT	

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Pulse

		Reported SAR					Scenario1	Scenario2	Scenario3	Scenario4	Scenario5	Scenario6
		1	2	3	4	5	1+2	1+5	1+2+5	3+4	3+5	3+4+5
Exposure Posit	tion	2.4GHz WLAN Main	2.4GHz WLAN Aux	5GHz WLAN Main	5GHz WLAN Aux	Bluetooth Aux	Summed	Summed	Summed	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)					
Bottom Surface	0	0.331	0.164	0.331	0.254	0.043	0.495	0.374	0.538	0.585	0.374	0.628
Front Edge	0	0.448	0.702	1.122	1.095	0.119	1.150	0.567	1.269	2.217	1.241	2.336

				Scenar	io:3+4+5				
Position	Conditions	SAR Value	Co	ordinates (n	nm)	ΣSAR	Peak Location	SPLSR	Simultaneous Transmission SAR
1 USILIOIT	Conditions	(W/kg)	x	у	z	(W/kg)	Separation Distance (mm)	SILSIN	Test
Encent Enderg	WLAN 5G Main	1.122	-3.60	80.00	-177.00	-	-	-	-
Front Edge	WLAN5G Aux + BT Aux	1.214	-0.80	-85.20	-177.00	2.336	165.22	0.022	SPLSR ≤ 0.04, Not required
	5G	Main			2 2mm 13.03mi		Aux	BT	

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4. Instruments List

		SAR Te	st Site: SAR_4		
Manufacturer	Device	Туре	Serial number	Date of last calibration	Date of next calibration
SPEAG	Dosimetric E-Field Probe	EX3DV4	7712	Mar/21/2022	Mar/20/2023
SPEAG	System Validation Dipole	D2450V2	727	Apr/25/2022	Apr/24/2023
SPEAG	System Validation Dipole	D5GHzV2	1023	Jan/27/2022	Jan/26/2023
SPEAG	Data acquisition Electronics	DAE4	1719	Mar/25/2022	Mar/24/2023
SPEAG	Software	DASY 8 V16.0.2.83	N/A	Calibration not required	Calibration not required
SPEAG	Phantom	ELI	N/A	Calibration not required	Calibration not required
SPEAG	Dielectric Assessment Kit	DAKS-3.5	1053	Feb/28/2022	Feb/27/2023
Agilent	Dual-directional coupler	778D	MY48220468	Aug/16/2021	Aug/15/2022
Agilent	Dual-directional coupler	772D	MY46151242	Aug/16/2021	Aug/15/2022
Agilent	MXG Analog Signal Generator	N5181A	MY50145142	Dec/23/2021	Dec/22/2022
EMCI	Amplifier	ZHL-42	980189	Calibration not required	Calibration not required
EMCI	Amplifier	ZVE-8G	980190	Calibration not required	Calibration not required
Anritsu	Power Meter	ML2496A	1337004	Oct/08/2021	Oct/07/2022
Anritsu	Power Sensor	MA2411B	1306052	Oct/08/2021	Oct/07/2022
R&S	Power Sensor	NRP18S	101973	Jan/22/2022	Jan/21/2023
LKM	Digital thermometer	DTM3000	EC14010603	Nov/09/2021	Nov/08/2022
TECPEL	Digital thermometer	DTM-303A	TP130077	Oct/28/2021	Oct/27/2022

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5. Measurements

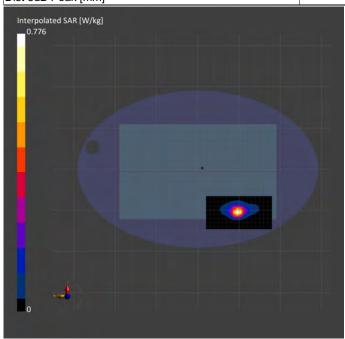
ID: 001

Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11b_Body_ Bottom Surface_CH 6_0mm_Main Ambient temperature: 22.5°C; Liquid temperature: 22°C

Exposure Conditions

Exposure Condi	tions				
Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conduc	tivity [S/m] TSL Permittivity
Flat, HSL	Bottom Surface, 0.00	2437.0, 6	8.16	1.781	38.883
Hardware Setup					
Phantom	Probe, Calibration Date			DAE, Calib	ration Date
ELI	EX3DV4 - SN7712, 2022	-03-21		DAE4 Sn17	719, 2022-03-25
Scans Setup					
			Area Scan		Zoom Scan
Grid Extents [mm]			84.0 x 156.0		30.0 x 30.0 x 30.0
Grid Steps [mm]			12.0 x 12.0		5.0 x 5.0 x 5.0
Sensor Surface [mm	ו]		3.0		1.4
Measurement Re	esults	·			
			Are	ea Scan	Zoom Scan
Date			202	2-06-22	2022-06-22
psSAR1g [W/kg]				0.576	0.622
psSAR8g [W/kg]				0.295	0.306
psSAR10g [W/kg]				0.267	0.277
Power Drift [dB]				0.02	0.01
M2/M1 [%]					54.1
Dist 3dB Peak [mm]					8.5



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Report No. : TESA2204000040EN

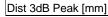
Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.2G_Body_Front Edge_CH 42 0mm Main

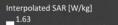
Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

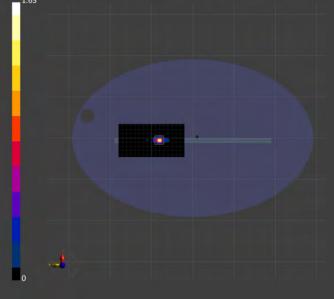
Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conduc	tivity [S/m] TSL Permittivity
Flat, HSL	Front Edge, 0.00	5210.0, 42	5.94	4.618	35.634
Hardware Setup					
Phantom	Probe, Calibration Date			DAE, Calib	ration Date
ELI	EX3DV4 - SN7712, 2022	-03-21		DAE4 Sn17	719, 2022-03-25
Scans Setup					
			Area Scan		Zoom Scan
Grid Extents [mm]			80.0 x 160.0		24.0 x 24.0 x 22.0
Grid Steps [mm]			10.0 x 10.0		4.0 x 4.0 x 2.0
Sensor Surface [mm	ו]		3.0		1.4
Measurement Re	esults				
			Are	ea Scan	Zoom Scan
Date			202	2-06-23	2022-06-23
psSAR1g [W/kg]				0.858	0.926
psSAR8g [W/kg]		0.234			
psSAR10g [W/kg]				0.197	0.205

Power Drift [dB] M2/M1 [%]







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-0.04

0.03

58.6

5.8



Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.3G_Body_Front Edge_CH 58 0mm Main

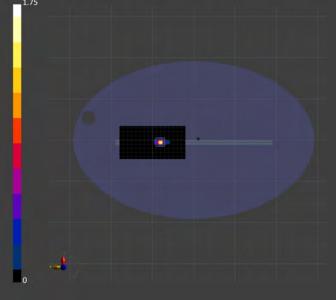
Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conduc	ctivity [S/m] TSL Permittivity
Flat, HSL	Front Edge, 0.00	5290.0, 58	5.94	4.699	35.542
Hardware Setup					
Phantom	Probe, Calibration Date			DAE, Calib	oration Date
ELI	EX3DV4 - SN7712, 2022	-03-21		DAE4 Sn1	719, 2022-03-25
Scans Setup				·	
			Area Scan		Zoom Scan
Grid Extents [mm]			80.0 x 160.0		24.0 x 24.0 x 22.0
Grid Steps [mm]			10.0 x 10.0		4.0 x 4.0 x 2.0
Sensor Surface [mm	ז]		3.0		1.4
Measurement R	esults		·		
			Are	ea Scan	Zoom Scan
Date			202	2-06-23	2022-06-23
psSAR1g [W/kg]				0.912	0.998
psSAR8g [W/kg]				0.265	
psSAR10g [W/kg]				0.206	0.221

psSAR10g [W/kg] Power Drift [dB] M2/M1 [%] Dist 3dB Peak [mm]





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-0.04

0.02

57.7

10.7



55.7

9.8

ID: 004

Report No. : TESA2204000040EN

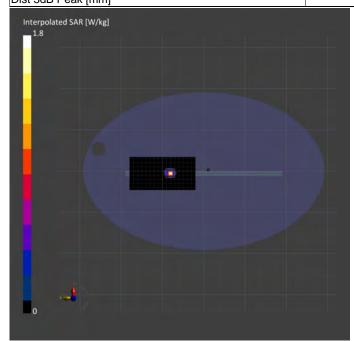
Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.6G_Body_Front Edge_CH 138 0mm Main

Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conducti	ivity [S/m] TSL Permittivity
Flat, HSL	Front Edge, 0.00	5690.0, 138	5.45	5.106	35.085
Hardware Setup					
Phantom	Probe, Calibration Date			DAE, Calibra	ation Date
ELI	EX3DV4 - SN7712, 2022	-03-21		DAE4 Sn17	19, 2022-03-25
Scans Setup					
			Area Scan		Zoom Scan
Grid Extents [mm]			80.0 x 160.0		24.0 x 24.0 x 22.0
Grid Steps [mm]			10.0 x 10.0		4.0 x 4.0 x 2.0
Sensor Surface [mm	ו]		3.0		1.4
Measurement Re	esults				
			Are	a Scan	Zoom Scan
Date			202	2-06-24	2022-06-24
psSAR1g [W/kg]				0.942	1.01
psSAR8g [W/kg]				0.258	
psSAR10g [W/kg]				0.206	0.214

psSAR10g [W/kg] Power Drift [dB] M2/M1 [%] Dist 3dB Peak [mm]



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-0.02



Report No. : TESA2204000040EN

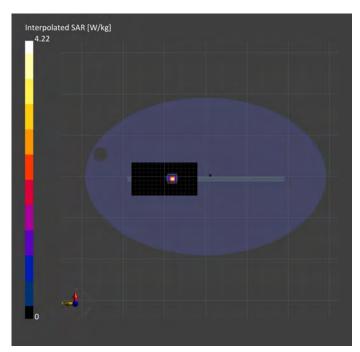
Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.8G_Body_Front Edge_CH 155 0mm Main

Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Exposure contai	lions				
Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductiv	vity [S/m] TSL Permittivity
Flat, HSL	Front Edge, 0.00	5775.0, 155	5.45	5.192	34.988
Hardware Setup					
Phantom	Probe, Calibration Date			DAE, Calibra	tion Date
ELI	EX3DV4 - SN7712, 2022	17712, 2022-03-21 DAE4 Sn1719, 2022-03-25			
Scans Setup					
			Area Scan		Zoom Scar
Grid Extents [mm]			80.0 x 160.0		24.0 x 24.0 x 22.0
Grid Steps [mm]			10.0 x 10.0		4.0 x 4.0 x 2.0
Sensor Surface [mm	ce [mm]		3.0		1.4
Measurement Re	esults		·		
			Are	ea Scan	Zoom Scan
Date			2022-06		2022-06-24
psSAR1g [W/kg]			0.8		0.966
psSAR8g [W/kg]			0.232		0.247

psSAR8g [W/kg]	0.232	0.247
psSAR10g [W/kg]	0.195	0.205
Power Drift [dB]	-0.02	0.03
M2/M1 [%]		55.3
Dist 3dB Peak [mm]		8.1



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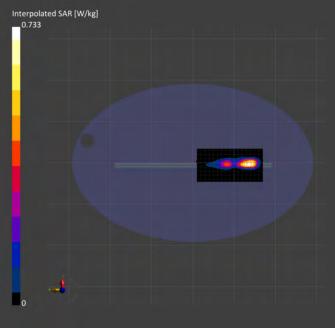


Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11b_Body_Front Edge_CH 1_0mm_Aux Ambient temperature: 22.5°C; Liquid temperature: 22°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Condu	ctivity [S/m]	TSL Permittivity
Flat, HSL	Front Edge, 0.00	2412.0, 1	8.16	1.759		38.927
Hardware Setup		÷				
Phantom	Probe, Calibration Date		DAE,	Calibration Date		
ELI	EX3DV4 - SN7712, 2022-	03-21	DAE4	Sn1719, 2022-0	3-25	
Scans Setup			·			
			Area Scar			Zoom Scar
Grid Extents [mm]			80.0 x 160.0	30.0 x 30		0.0 x 30.0 x 30.0
Grid Steps [mm]		1:		5.0 x 5		5.0 x 5.0 x 5.0
Sensor Surface [mm	ו]	3.0		1.4		
Measurement Re	esults					
				Area Scan		Zoom Scar
Date			2	022-06-22		2022-06-22
psSAR1g [W/kg]				0.576		0.689
psSAR8g [W/kg]			0.299			0.330
psSAR10g [W/kg]			0.269			0.297
Power Drift [dB]			-0.03			-0.05
M2/M1 [%]						54.1
Dist 3dB Peak [mm]						6.0



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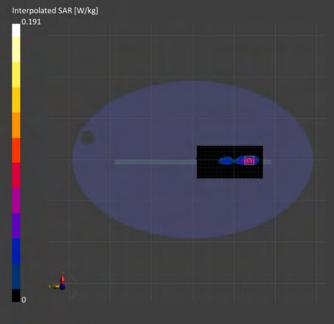


Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), Bluetooth(GFSK)_Body_Front Edge_CH 0_0mm_Aux Ambient temperature: 22.5°C; Liquid temperature: 22°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductiv	vity [S/m] TSL Permittivity	
Flat, HSL	Front Edge, 0.00	2402.0, 0	8.16	1.751	38.945	
Hardware Setup			·			
Phantom	Probe, Calibration Date			DAE, Calibra	tion Date	
ELI	EX3DV4 - SN7712, 2022	-03-21		DAE4 Sn171	9, 2022-03-25	
Scans Setup						
			Area Scan		Zoom Scan	
Grid Extents [mm]			80.0 x 160.0		30.0 x 30.0 x 30.0	
Grid Steps [mm]		12.0 x 12.0		5.0 x 5.0 x 5.0		
Sensor Surface [mm	ו]	3.0		1.4		
Measurement Re	esults					
			Are	ea Scan	Zoom Scan	
Date			2022-06-22		2022-06-22	
psSAR1g [W/kg]			0.063		0.074	
psSAR8g [W/kg]			0.033		3 0.03	
psSAR10g [W/kg]			0.029		0.031	
Power Drift [dB]		-0.05		0.04		
M2/M1 [%]					53.7	
Dist 3dB Peak [mm]					5.0	



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0.03 56.0 7.0

ID: 008

Report No. : TESA2204000040EN

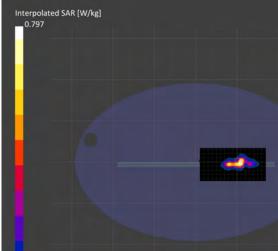
Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.2G_Body_Front Edge_CH 42 0mm Aux

Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conduc	ctivity [S/m] TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5210.0, 42	5.94	4.618	35.634	
Hardware Setup						
Phantom	Probe, Calibration Date			DAE, Calib	oration Date	
ELI	EX3DV4 - SN7712, 2022	-03-21		DAE4 Sn1	719, 2022-03-25	
Scans Setup				·		
-			Area Scan		Zoom Scan	
Grid Extents [mm]			80.0 x 160.0	24.0 x 24.0 x		
Grid Steps [mm]			10.0 x 10.0		4.0 x 4.0 x 2.0	
Sensor Surface [mm	ו]	3.0			1.4	
Measurement Re	esults					
			Are	ea Scan	Zoom Scan	
Date			202	2-06-23	5-23 2022-06-2	
psSAR1g [W/kg]			0.		0.718	
psSAR8g [W/kg]			0.219		0.159	
psSAR10g [W/kg]		0.192				

psSAR10g [W/kg]	0.192	
Power Drift [dB]	0.02	
M2/M1 [%]		
Dist 3dB Peak [mm]		



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7.6

ID: 009

Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.3G_Body_Front Edge_CH 58 0mm Aux

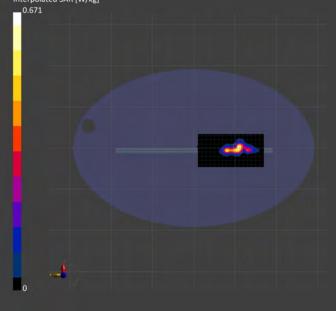
Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductiv	ity [S/m] TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5290.0, 58	5.94	4.699	35.542	
Hardware Setup						
Phantom	Probe, Calibration Date			DAE, Calibrat	ion Date	
ELI	EX3DV4 - SN7712, 2022	-03-21				
Scans Setup						
			Area Scan		Zoom Scan	
Grid Extents [mm]		80.0 x 160.0	24.0 x 24.0 x 22			
Grid Steps [mm]			10.0 x 10.0 4.0 x			
Sensor Surface [mm]		3.0			
Measurement Re	esults					
			Are	ea Scan	Zoom Scan	
Date			2022-06-23		2022-06-23	
psSAR1g [W/kg]		0.448		0.562		
psSAR8g [W/kg]			0.173		0.126	
psSAR10g [W/kg]			0.152		0.106	
Power Drift [dB]			-0.01		0.02	



M2/M1 [%]



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7.5

ID: 010

Report No. : TESA2204000040EN

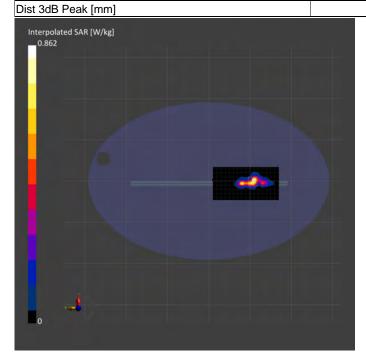
Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.6G_Body_Front Edge_CH 138 0mm Aux

Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductiv	ity [S/m] TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5690.0, 138	5.45	5.106	35.085	
Hardware Setup					·	
Phantom	Probe, Calibration Date			DAE, Calibrat	ion Date	
ELI	EX3DV4 - SN7712, 2022	-03-21				
Scans Setup						
-			Area Scan		Zoom Scan	
Grid Extents [mm]		80.0 x 160.0	24.0 x 24.0 x 22			
Grid Steps [mm]			10.0 x 10.0 4.0 x 4			
Sensor Surface [mm	ו]		3.0			
Measurement Re	esults					
			Are	ea Scan	Zoom Scan	
Date			202	2-06-24	2022-06-24	
psSAR1g [W/kg]			0.582		582 0.740	
psSAR8g [W/kg]			0.220		0.164	
psSAR10g [W/kg]			0.193		0.138	
Power Drift [dB]			-0.01		0.03	

M2/M1 [%]



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5.3

ID: 011

Report No. : TESA2204000040EN

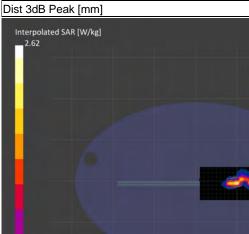
Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.8G_Body_Front Edge_CH 155 0mm Aux

Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductiv	ity [S/m] TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5775.0, 155	5.45	5.192	34.988	
Hardware Setup						
Phantom	Probe, Calibration Date			DAE, Calibrat	tion Date	
ELI	EX3DV4 - SN7712, 2022	-03-21		DAE4 Sn1719	9, 2022-03-25	
Scans Setup						
-			Area Scan		Zoom Scan	
Grid Extents [mm]		80.0 x 160.0	24.0 x 24.0 x 2			
Grid Steps [mm]			10.0 x 10.0 4.0 x			
Sensor Surface [mm	ו]		3.0			
Measurement Re	esults					
			Are	ea Scan	Zoom Scan	
Date			202	2-06-24	4 2022-06-24	
psSAR1g [W/kg]			0.529		0.590	
psSAR8g [W/kg]			0.187		187 0.176	
psSAR10g [W/kg]			0.166		0.166 0.151	
Power Drift [dB]			0.02		0.03	

M2/M1 [%]



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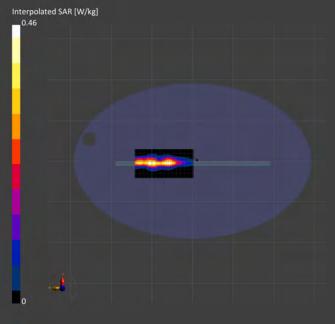


Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11b_Body_Front Edge_CH 6_0mm_Main Ambient temperature: 22.5°C; Liquid temperature: 22°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m] TSL Permittivity
Flat, HSL	Front Edge, 0.00	2437.0, 6	8.16	1.781	38.883
Hardware Setup			1		
Phantom	Probe, Calibration Date		DAE, C	alibration Date	
ELI	EX3DV4 - SN7712, 2022-	·03-21	DAE4 S	Sn1719, 2022-03-25	
Scans Setup			·		
-			Area S	can	Zoom Scan
Grid Extents [mm]			72.0 x 14	4.0	30.0 x 30.0 x 30.0
Grid Steps [mm]			12.0 x 1	2.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]		3.0		
Measurement Re	esults				
			Ar	ea Scan	Zoom Scar
Date			202	22-06-22	2022-06-22
psSAR1g [W/kg]			0.353		0.440
psSAR8g [W/kg]			0.183		0.203
psSAR10g [W/kg]		0.167		0.182	
Power Drift [dB]		0.02		0.04	
M2/M1 [%]					59.4
Dist 3dB Peak [mm]					7.0



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ID: 013

Report No. : TESA2204000040EN

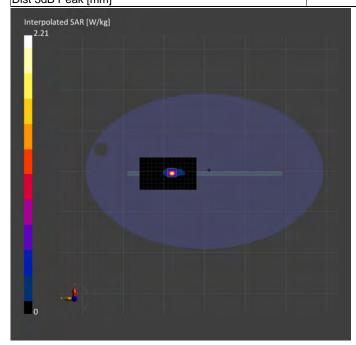
Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.2G_Body_Front Edge_CH 42 0mm Main

Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Cond	ductivity [S/m] TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5210.0, 42	5.94	4.618	35.634	
Hardware Setup						
Phantom	Probe, Calibration Date			DAE, Cali	bration Date	
ELI	EX3DV4 - SN7712, 2022-	03-21		DAE4 Sn	1719, 2022-03-25	
Scans Setup						
•			Area Scan	Zoom S		
Grid Extents [mm]	its [mm] 80.0 x 140.0 24.0			24.0 x 24.0 x 22.0		
Grid Steps [mm]			10.0 x 10.0 4.0			
Sensor Surface [mm]		3.0	2		
Measurement Re	esults					
			Are	ea Scan	Zoom Scan	
Date			202	2-06-23	3 2022-06-23	
psSAR1g [W/kg]			0.893		1.03	
psSAR8g [W/kg]			0.267		67 0.29	
psSAR10g [W/kg]	osSAR10g [W/kg]		0.228		0.252	
Power Drift [dB]			-0.02		-0.04	
M2/M1 [%]					54.0	

M2/M1 [%] Dist 3dB Peak [mm]



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Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.3G_Body_Front Edge_CH 58 0mm Main

Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversi Factor			TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5290.0, 58	5.94	4	.699	35.542	
Hardware Setup							
Phantom	Probe, Calibration Date		D	AE, Calibra	ation Date		
ELI	EX3DV4 - SN7712, 2022-	03-21	D	0AE4 Sn171	9, 2022-03-25		
Scans Setup							
			A	rea Scan		Zoom Scar	
Grid Extents [mm]			80.0 x 140.0 24.0		24.0 x 24.0 x 22.0		
Grid Steps [mm]			10	0.0 x 10.0		4.0 x 4.0 x 2.0	
Sensor Surface [mm	n]		3.0			1.4	
Measurement Re	esults						
				Area S	can	Zoom Scar	
Date			2022-06-2		06-23 2022-06-		
psSAR1g [W/kg]			0.87		0.876 1.		
psSAR8g [W/kg]			0.26		0.261 0.3		
psSAR10g [W/kg]			0		0.222 0		
Power Drift [dB]			-0.03		03 -0.0		
M2/M1 [%]	M2/M1 [%]					54.1	
Dist 3dB Peak [mm]						11.4	



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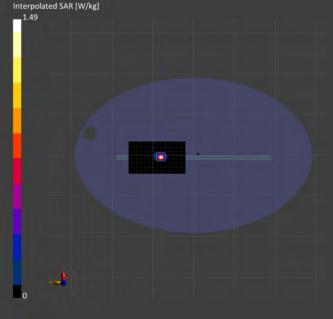
Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.6G_Body_Front Edge_CH 138 0mm Main

Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Front Edge, 0.00	5690.0, 138	5.45	5.106	35.085
Hardware Setup					
Phantom	Probe, Calibration Date		DAE, Calib	oration Date	
ELI	EX3DV4 - SN7712, 2022-	03-21	DAE4 Sn1	719, 2022-03-25	
Scans Setup					
			Area Scar	1	Zoom Scan
Grid Extents [mm]			80.0 x 140.0 24.0		4.0 x 24.0 x 22.0
Grid Steps [mm]		10.0 x 10.0 4.0			4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0			1.4
Measurement Re	esults				
			Area	Scan	Zoom Scan
Date			2022-	06-24	2022-06-24
psSAR1g [W/kg]				0.827	0.981
psSAR8g [W/kg]			0.235		
psSAR10g [W/kg]				0.199	0.226
Power Drift [dB]				0.03	0.01
M2/M1 [%]					51.5
Dist 3dB Peak [mm]					9.1
Internelated CAD [M/kg]				·	



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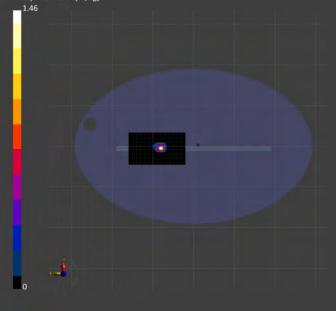
Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.8G_Body_Front Edge_CH 155 0mm Main

Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Sectio TSL	n, Position, Test Distanc [mm]	e Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S	S/m]TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5775.0, 155	5.45	5.192	34.988	
Hardware Se	up	·	·			
Phantom	Probe, Calibration Date		DAE, Ca	alibration Date		
ELI	EX3DV4 - SN7712, 2022-0	3-21	DAE4 S	n1719, 2022-03-25		
Scans Setup						
			Area Scan		Zoom Scan	
Grid Extents [mr	n]		80.0 x 140.0		24.0 x 24.0 x 22.0	
Grid Steps [mm]			10.0 x 10.0 4			
Sensor Surface	[mm]		3.0		1.4	
Measuremen	t Results					
			Ar	ea Scan	Zoom Scan	
Date			2022-06-24		2022-06-24	
psSAR1g [W/kg			0.818		0.967	
psSAR8g [W/kg			0.233		0.233 0.26	
psSAR10g [W/kg]			0.19		0.198 0.22	
Power Drift [dB]			0.04		.04 0.01	
M2/M1 [%]					50.9	
Dist 3dB Peak [r	nm]				8.4	
Interpolated SAR [V 1.46	//kg]					



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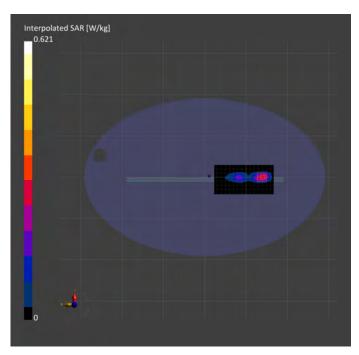


Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11b_Body_Front Edge_CH 1_0mm_Aux Ambient temperature: 22.5°C; Liquid temperature: 22°C

Exposure Conditions

10113					
Position, Test Distance [mm]	Frequency [MHz], Channel Number	Convers Factor	ion TSL	Conductivity [S/m]	TSL Permittivity
Front Edge, 0.00	2412.0, 1	8.16	1.75	9	38.927
Probe, Calibration Date		C	AE, Calibratio	n Date	
EX3DV4 - SN7712, 2022-	03-21	C	DAE4 Sn1719,	2022-03-25	
		A	vrea Scan		Zoom Scan
Grid Extents [mm]			72.0 x 144.0 30.0		0.0 x 30.0 x 30.0
		12.0 x 12.0 5.0			
)]		3.0			1.4
esults					
			Area Sca	า	Zoom Scan
			2022-06-22	2	2022-06-22
			0.50	2	0.668
			0.26	3	0.320
			0.24	2	0.287
			-0.0	1	-0.06
					66.2
					7.0
	Position, Test Distance [mm] Front Edge, 0.00 Probe, Calibration Date EX3DV4 - SN7712, 2022-	Position, Test Distance [mm] Frequency [MHz], Channel Number Front Edge, 0.00 2412.0, 1 Probe, Calibration Date EX3DV4 - SN7712, 2022-03-21 Image: State of the state	[mm] Channel Number Factor Front Edge, 0.00 2412.0, 1 8.16 Probe, Calibration Date E EX3DV4 - SN7712, 2022-03-21 E 72. 72. 1 12	Position, Test Distance [mm] Frequency [MHz], Channel Number Conversion Factor TSL Front Edge, 0.00 2412.0, 1 8.16 1.75 Probe, Calibration Date DAE, Calibration DAE, Calibration EX3DV4 - SN7712, 2022-03-21 DAE4 Sn1719, Area Scan 72.0 x 144.0 12.0 x 12.0 J 3.0 2022-06-22 Ossilts 0.502 0.502 October Construction 0.266 0.242	Position, Test Distance [mm] Frequency [MHz], Channel Number Conversion Factor TSL Conductivity [S/m] Front Edge, 0.00 2412.0, 1 8.16 1.759 Probe, Calibration Date DAE, Calibration Date DAE4 Sn1719, 2022-03-25 EX3DV4 - SN7712, 2022-03-21 Area Scan 72.0 x 144.0 3 1 12.0 x 12.0 3.0 3.0



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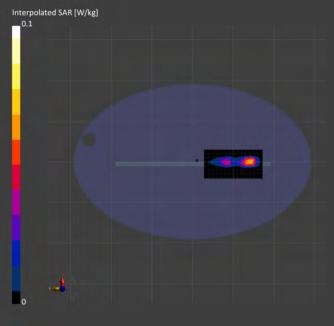


Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), Bluetooth(GFSK)_Body_Front Edge_CH 0_0mm_Aux Ambient temperature: 22.5°C; Liquid temperature: 22°C

Exposure Conditions

Exposure conur						
Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S	S/m]TSL Permittivity	
Flat, HSL	Front Edge, 0.00	2402.0, 0	8.16	1.751	38.945	
Hardware Setup						
Phantom	Probe, Calibration Date		DAE, Ca	libration Date		
ELI	EX3DV4 - SN7712, 2022-	03-21	DAE4 Sr	1719, 2022-03-25		
Scans Setup						
			Area Sca	an	Zoom Scan	
Grid Extents [mm]	Extents [mm] 72.0 x 144.0 30.0 x			30.0 x 30.0 x 30.0		
Grid Steps [mm]			12.0 x 12.0 5.0 x 5.0			
Sensor Surface [mm]		3.0			
Measurement Re	esults					
			Are	ea Scan	Zoom Scan	
Date			2022	2-06-22	2022-06-22	
psSAR1g [W/kg]				0.057	0.077	
psSAR8g [W/kg]				0.031	0.037	
psSAR10g [W/kg]				0.028	0.034	
Power Drift [dB]				-0.06	0.01	
M2/M1 [%]					69.1	
Dist 3dB Peak [mm]					5.1	



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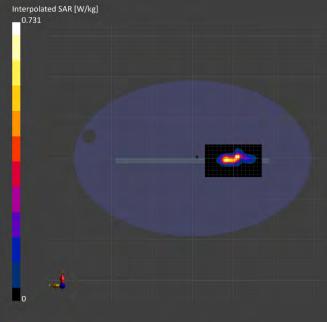
Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.2G_Body_Front Edge_CH 42 0mm Aux

Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity	[S/m] TSL Permittivity
Flat, HSL	Front Edge, 0.00	5210.0, 42	5.94	4.618	35.634
Hardware Setup					
Phantom	Probe, Calibration Date		DAE, Cal	libration Date	
ELI	EX3DV4 - SN7712, 2022-0)3-21	DAE4 Sn	1719, 2022-03-25	
Scans Setup					
			Area Scar	n	Zoom Scan
Grid Extents [mm]			80.0 x 140.0 24.0 x 24		
Grid Steps [mm]			10.0 x 10.0 4.0 x 4		
Sensor Surface [mm]		3.0		
Measurement Re	esults				
			Are	a Scan	Zoom Scar
Date			2022	2-06-23	2022-06-23
psSAR1g [W/kg]				0.451	0.623
psSAR8g [W/kg]			0.182		0.207
psSAR10g [W/kg]				0.161	0.178
Power Drift [dB]				0.04	-0.01
M2/M1 [%]					55.9
Dist 3dB Peak [mm]					7.2
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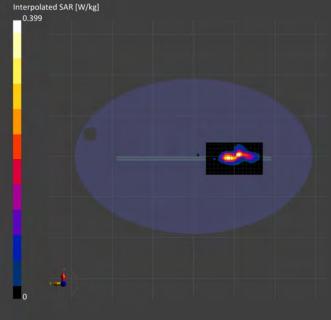
Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.3G_Body_Front Edge_CH 58 0mm Aux

Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor		TSL Conductivity [S/m]	TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5290.0, 58	5.94		4.699	35.542	
Hardware Setup							
Phantom	Probe, Calibration Date			DAE, Calib	oration Date		
ELI	EX3DV4 - SN7712, 2022-	-03-21		DAE4 Sn1	719, 2022-03-25		
Scans Setup							
-				Area Scar	1	Zoom Scan	
Grid Extents [mm]	Grid Extents [mm]			80.0 x 140.0	40.0 24.0 x 24.0 x 2		
Grid Steps [mm]			10.0 x 10.0 4.0 x			4.0 x 4.0 x 2.0	
Sensor Surface [mm]		3.0			1.4	
Measurement Re	esults						
				Area	Scan	Zoom Scar	
Date				2022-	06-23	2022-06-23	
psSAR1g [W/kg]					0.263	0.276	
psSAR8g [W/kg]			0.107		0.107	107 0.10	
psSAR10g [W/kg]					0.095	0.092	
Power Drift [dB]					-0.04	-0.01	
M2/M1 [%]						59.2	
Dist 3dB Peak [mm]						7.4	



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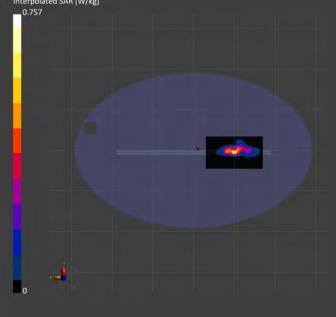
Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11ac(80M) 5.6G_Body_Front Edge_CH 138 0mm Aux

Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	
Flat, HSL	Front Edge, 0.00	5690.0, 138	5.45	5.106	35.085	
Hardware Setup						
Phantom	Probe, Calibration Date		DAE, Calib	oration Date		
ELI	EX3DV4 - SN7712, 2022-0	3-21	DAE4 Sn1	719, 2022-03-25		
Scans Setup			·			
			Area Scan		Zoom Scan	
Grid Extents [mm]			80.0 x 140.0 24.0 x 2		4.0 x 24.0 x 22.0	
Grid Steps [mm]		10.0 x 10.0 4.0 x				
Sensor Surface [mm	1]	3.0			1.4	
Measurement Re	esults					
			Area	Scan	Zoom Scan	
Date			2022-	06-24	2022-06-24	
psSAR1g [W/kg]				0.461	0.607	
psSAR8g [W/kg]			0.170		170 0.203	
psSAR10g [W/kg]				0.150	0.178	
Power Drift [dB]				0.03	0.05	
M2/M1 [%]					62.3	
Dist 3dB Peak [mm]					7.8	
Interpolated SAR [W/kg]	21					



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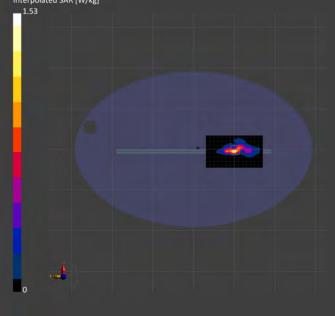
Report No. : TESA2204000040EN

Measurement Report for ASUS B5402(NB), WLAN 802.11n(40M) 5.8G_Body_Front Edge_CH 151 0mm Aux

Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Front Edge, 0.00	5755.0, 151	5.45	5.172	35.011
Hardware Setup			÷		
Phantom	Probe, Calibration Date		DAE, Calil	oration Date	
ELI	EX3DV4 - SN7712, 2022-	·03-21	DAE4 Sn1	719, 2022-03-25	
Scans Setup					
-			Area Scar	ו	Zoom Scan
Grid Extents [mm]			80.0 x 140.0) 2	4.0 x 24.0 x 22.0
Grid Steps [mm]		10.0 x 10.0 4.0 x 4			4.0 x 4.0 x 2.0
Sensor Surface [mm	ו]		3.0		
Measurement Re	esults				
			Area	Scan	Zoom Scan
Date			2022-	06-24	2022-06-24
psSAR1g [W/kg]				0.911	1.07
psSAR8g [W/kg]				0.321	0.359
psSAR10g [W/kg]				0.284	0.314
Power Drift [dB]				-0.05	-0.02
M2/M1 [%]					59.1
Dist 3dB Peak [mm]					10.1
Interpolated SAR [W/kg]	21				



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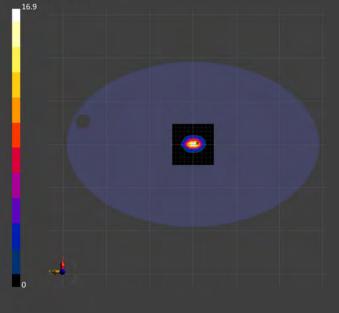


6. SAR System Performance Verification

Report No. : TESA2204000040EN

Measurement Report for Device, FRONT, D2450, CW, Channel 2450 (2450.0 MHz), SN:727 Ambient temperature: 22.5°C; Liquid temperature: 22°C **Exposure Conditions**

Phantom Section, TSL	Position, Test Distance [mm]	Conversion Factor	TSL Condu	ctivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10.00	-	8.16	1.792		38.859
Hardware Setup						
Phantom	Probe, Calibration Date		DA	E, Calibration	Date	
ELI	EX3DV4 - SN7712, 2022-03	3-21	DA	E4 Sn1719, 2	022-03-25	
Scans Setup						
			Area Sca	an		Zoom Scan
Grid Extents [mm]			96.0 x 96	.0		30.0 x 30.0 x 30.0
Grid Steps [mm]			12.0 x 12	.0		5.0 x 5.0 x 5.0
Sensor Surface [mm]			3	.0		1.4
Measurement Resul	lts					
				Area Scan		Zoom Scan
Date				2022-06-22		2022-06-22
psSAR1g [W/kg]				12.8		12.9
psSAR8g [W/kg]				6.51		6.64
psSAR10g [W/kg]				5.88		6.02
Power Drift [dB]				-0.01		-0.02
M2/M1 [%]						59.6
Dist 3dB Peak [mm]						9.0
Interpolated SAR [W/kg] 16.9						



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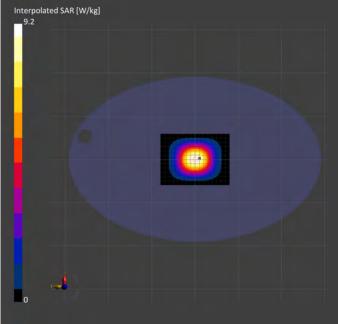
f (886-2) 2298-0488



Report No. : TESA2204000040EN Measurement Report for Device, FRONT, D5GHz, CW, Channel 5250 (5250.0 MHz) , SN:1023 Ambient temperature: 22.2°C; Liquid temperature: 21.8°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Conversion Factor	TSL Conductivity [S/	m] TSL Permittivity
Flat, HSL	FRONT, 10.00	5.94	4.658	35.588
Hardware Setup				
Phantom	Probe, Calibration Date	DAI	E, Calibration Date	
ELI	EX3DV4 - SN7712, 2022-03-2	21 DAI	E4 Sn1719, 2022-03-2	5
Scans Setup				
		Area S	can	Zoom Scan
Grid Extents [mm]		120.0 x 16	0.0	24.0 x 24.0 x 22.0
Grid Steps [mm]		10.0 x 10.0		4.0 x 4.0 x 2.0
Sensor Surface [mm]		3.0		1.4
Measurement Resul	ts			
			Area Scan	Zoom Scan
Date			2022-06-23	2022-06-23
psSAR1g [W/kg]			6.01	8.15
psSAR8g [W/kg]		2.74		3.05
psSAR10g [W/kg]			2.35	
Power Drift [dB]			-0.03	-0.04
M2/M1 [%]				55.0
Dist 3dB Peak [mm]				7.4



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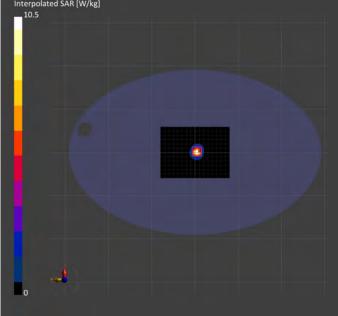
f (886-2) 2298-0488



Report No. : TESA2204000040EN Measurement Report for Device, FRONT, D5GHz, CW, Channel 5600 (5600.0 MHz) , SN:1023 Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10.00	5.29	5.015	35.188
Hardware Setup				
Phantom	Probe, Calibration Date	DAE	E, Calibration Date	
ELI	EX3DV4 - SN7712, 2022-03-2	1 DAE	E4 Sn1719, 2022-03-25	
Scans Setup				
		Area S	can	Zoom Scan
Grid Extents [mm]		120.0 x 16	60.0	24.0 x 24.0 x 22.0
Grid Steps [mm]		10.0 x 1	0.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]			3.0	1.4
Measurement Resul	ts			
			Area Scan	Zoom Scan
Date			2022-06-24	2022-06-24
psSAR1g [W/kg]			7.52	8.18
psSAR8g [W/kg]			2.67	2.73
psSAR10g [W/kg]			2.30	2.35
Power Drift [dB]			-0.03	-0.02
M2/M1 [%]				51.7
Dist 3dB Peak [mm]				7.5



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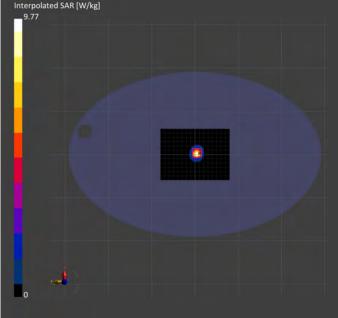
f (886-2) 2298-0488



Report No. : TESA2204000040EN Measurement Report for Device, FRONT, D5GHz, CW, Channel 5750 (5750.0 MHz) , SN:1023 Ambient temperature: 22.1°C; Liquid temperature: 21.7°C

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10.00	5.45	5.167	35.017
Hardware Setup		·		
Phantom	Probe, Calibration Date	DAE	E, Calibration Date	
ELI	EX3DV4 - SN7712, 2022-03-2	1 DAE	E4 Sn1719, 2022-03-25	
Scans Setup				
		Area So	can	Zoom Scan
Grid Extents [mm]		120.0 x 16	0.0	24.0 x 24.0 x 22.0
Grid Steps [mm]		10.0 x 1	0.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]			3.0	1.4
Measurement Resul	ts			
			Area Scan	Zoom Scan
Date			2022-06-24	2022-06-24
psSAR1g [W/kg]			7.00	8.11
psSAR8g [W/kg]			2.53	2.71
psSAR10g [W/kg]			2.19	2.33
Power Drift [dB]			0.06	0.04
M2/M1 [%]				50.5
Dist 3dB Peak [mm]				7.5



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7. Uncertainty Budget

			-						
A	с	D	е		f	g	h=c * f / e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration	6.55%	N	1	1	1	1	6.55%	6.55%	œ
lsotropy , Axial	3.50%	R	√3	1.732	1	1	2.02%	2.02%	œ
lsotropy, Hemispherical	9.60%	R	√3	1.732	1	1	5.54%	5.54%	œ
Modulation Response	2.40%	R	√3	1.732	1	1	1.40%	1.40%	~~~
Boundary Effect	1.00%	R	√3	1.732	1	1	0.58%	0.58%	œ
Linearity	4.70%	R	√3	1.732	1	1	2.71%	2.71%	æ
Detection Limits	1.00%	R	√3	1.732	1	1	0.58%	0.58%	œ
Readout Electronics	0.30%	Ν	1	1	1	1	0.30%	0.30%	æ
Response time	0.80%	R	√3	1.732	1	1	0.46%	0.46%	œ
Integration Time	2.60%	R	√3	1.732	1	1	1.50%	1.50%	œ
Measurement drift (class A evaluation)	1.75%	R	√3	1.732	1	1	1.01%	1.01%	œ
RF ambient condition - noise	3.00%	R	√3	1.732	1	1	1.73%	1.73%	œ
RF ambient conditions - reflections	3.00%	R	√3	1.732	1	1	1.73%	1.73%	œ
Probe positioner Mechanical restrictions	0.40%	R	√3	1.732	1	1	0.23%	0.23%	œ
Probe Positioning with respect to phantom shell	2.90%	R	√3	1.732	1	1	1.67%	1.67%	œ
Post-processing	1.00%	R	√3	1.732	1	1	0.58%	0.58%	œ
Max SAR Eval	1.00%	R	√3	1.732	1	1	0.58%	0.58%	œ
Test Sample related									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	√3	1.732	1	1	2.89%	2.89%	œ
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3	1.732	1	1	2.31%	2.31%	œ
Liquid permittivity (mea.)	0.96%	N	1	1	0.64	0.43	0.61%	0.41%	М
Liquid Conductivity (mea.)	1.02%	N	1	1	0.6	0.49	0.61%	0.50%	М
Combined standard uncertainty		RSS					11.75%	11.72%	
Expant uncertainty (95% confidence interval), K=2							23.50%	23.45%	

Measurement Uncertainty evaluation template for DUT SAR test (3-6G)

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A	с	D	е		f	g	h=c * f / e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration	6.00%	N	1	1	1	1	6.00%	6.00%	~
lsotropy , Axial	3.50%	R	√3	1.732	1	1	2.02%	2.02%	~
lsotropy, Hemispherical	9.60%	R	√3	1.732	1	1	5.54%	5.54%	~
Modulation Response	2.40%	R	√3	1.732	1	1	1.40%	1.40%	~
Boundary Effect	1.00%	R	√3	1.732	1	1	0.58%	0.58%	~
Linearity	4.70%	R	√3	1.732	1	1	2.71%	2.71%	~~
Detection Limits	1.00%	R	√3	1.732	1	1	0.58%	0.58%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Response time	0.80%	R	√3	1.732	1	1	0.46%	0.46%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Integration Time	2.60%	R	√3	1.732	1	1	1.50%	1.50%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Measurement drift (class A evaluation)	1.75%	R	√3	1.732	1	1	1.01%	1.01%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
RF ambient condition - noise	3.00%	R	√3	1.732	1	1	1.73%	1.73%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
RF ambient conditions - reflections	3.00%	R	√3	1.732	1	1	1.73%	1.73%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Probe positioner Mechanical restrictions	0.40%	R	√3	1.732	1	1	0.23%	0.23%	~
Probe Positioning with respect to phantom shell	2.90%	R	√3	1.732	1	1	1.67%	1.67%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Post-processing	1.00%	R	√3	1.732	1	1	0.58%	0.58%	~
Max SAR Eval	1.00%	R	√3	1.732	1	1	0.58%	0.58%	~
Test Sample related									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	√3	1.732	1	1	2.89%	2.89%	~
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3	1.732	1	1	2.31%	2.31%	~~
Liquid permittivity (mea.)	0.87%	N	1	1	0.64	0.43	0.56%	0.37%	М
Liquid Conductivity (mea.)	0.59%	N	1	1	0.6	0.49	0.35%	0.29%	М
Combined standard uncertainty		RSS					11.44%	11.42%	
Expant uncertainty (95% confidence interval), K=2							22.87%	22.84%	

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Appendixes

Refer to separated files for the following appendixes.

TESA2204000040EN SAR_Appendix A Photographs

TESA2204000040EN SAR_Appendix B DAE & Probe Cal. Certificate

TESA2204000040EN SAR_Appendix C Phantom Description & Dipole Cal. Certificate

- End of report -

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