

WLAN 2.4G										
Mode	Frequency	Maximum Conducted Output Power	Tune-up power							
	(MHz)	(dBm)	(dBm)							
	2412	15.70								
b	2437	15.60	16.0							
	2462	15.17								
	2412	16.01								
g	2437	16.04	16.5							
	2462	15.67								
	2412	15.33								
n20	2437	15.94	16.5							
	2462	15.60								
	2422	16.56								
n40	2437	16.35	16.0							
	2452	15.15								

	WLAN	N 5.2G			
Mode	Frequency	Maximum Conducted Output Power	Tune-up power		
	(MHz)	(dBm)	(dBm)		
	5180	14.59			
а	5220	14.27	15.0		
	5240	14.54			
	5180	14.25			
n20	5220	14.14	15.0		
	5240	14.33			
~10	5190	14.01	14 5		
1140	5230	14.14	14.5		
	5180	14.16			
ac20	5220	14.10	15.0		
	5240	14.27			
2010	5190	14.08			
a040	5230	14.09	[4.5		
ac80	5210	13.48	14.0		

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WLAN 5.4G										
Mode	Frequency	Maximum Conducted Output Power	Tune-up power							
	(MHz)	(dBm)	(dBm)							
	5260	14.32								
а	5300	14.06	15.0							
	5320	13.74								
	5260	14.23								
n20	5300	14.05	14.5							
	5320	13.69								
- 10	5270	13.99	14 5							
1140	5310	13.59	14.5							
	5260	14.24								
ac20	5300	14.07	14.5							
	5320	13.70								
2210	5270	14.03	445							
ac40	5310	13.52	14.0							
ac80	5290	13.56	14.0							

	WLAN 5.6G											
Mode	Frequency	Maximum Conducted Output Power	Tune-up power									
	(MHz)	(dBm)	(dBm)									
	5500	14.60										
а	5580	14.54	15.5									
	5700	14.80										
	5500	14.06										
n20	5580	14.15	15.0									
	5700	14.58										
	5510	13.75	$\land \land $									
n40	5550	13.87	15.0									
	5670	14.42										
	5500	14.05										
ac20	5580	14.15	15.0									
	5700	14.71										
	5510	13.67										
ac40	5550	13.90	15.0									
	5670	14.39										
ac80	5610	13.28	14.5									

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	WLAN 5.8G										
Mode	Frequency	Maximum Conducted Output Power	Tune-up power								
	(MHz)	(dBm)	(dBm)								
	5745	14.67									
а	5785	14.27	15.0								
	5825	14.33									
	5745	14.46									
n20	5785	14.12	15.0								
	5825	13.70									
- 10	5755	14.24	14 5								
1140	5795	14.08	14.5								
	5745	14.55									
ac20	5785	14.21	15.0								
	5825	13.76									
	5755	14.25									
ac40	5795	13.84	14.5								
ac80	5775	13.65	14.0								

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# 14.2 Transmit Antennas and SAR Measurement Position

### EUT Antenna Location:



# Right

Antenna information								
Antenna	Function							
Main Antenna	WIFI2.4G + Bluetooth							
DIV Antenna	WIFI5G + GPS							

	Distance of The Antenna to the EUT surface and edge (mm)												
Antennas	Front	Back	Left Side	Right Side									
Main Antenna	<5	<5	<5	192	70	23							
DIV Antenna	<5 <5		<5	192	13	68							

Body mode: Positions for SAR tests; Test distance: 0mm											
Mode	Front	Back	Top Side	Bottom Side	Left Side	Right Side					
Main Antenna	Yes	Yes	Yes	No	No	Yes					
DIV Antenna	Yes	Yes	Yes	No	Yes	No					

Yes: The distance to Edge is less than 25mm, testing is required. No: The distance to Edge is more than 25 mm, testing is not required.



# 14.3 Measured and Reported (Scaled) SAR Results

The calculated SAR is obtained by the following formula:

- 1. Reported SAR for WWAN=Measured SAR \* Tune-up Scaling factor
- 2. Reported SAR for WLAN and Bluetooth=Measured SAR \* Tune-up Scaling factor \* Duty Cycle Scaling factor
- 3. Duty Cycle Scaling factor=1/ Duty Cycle (%)

### KDB 447498 D01 General RF Exposure Guidance:

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- $\leq$  0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

### KDB 248227 D01 802.11 Wi-Fi SAR

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements.

For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions.

DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.16 The initial test position procedure is described in the following:

- a) When the *reported* SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band. SAR is also not required for that exposure configuration in the subsequent test configuration(s).
- b) When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest extrapolated or estimated 1-g SAR conditions determined by area scans or next closest/smallest test separation distance and maximum RF coupling test positions based on manufacturer justification, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions (left, right, touch, tilt or subsequent surfaces and edges) are tested.
- c) For all positions/configurations tested using the initial test position and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required channels are tested.

Additional power measurements may be required for this step, which should be limited to those necessary for identifying the subsequent highest output power channels.

When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is  $\leq$  1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is  $\leq 1.2$  W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR



Bluetooth													
RF Exposure Conditions	Dist. (mm)	Mode	Test Position	СН.	Freq. (MHz)	Duty Cycle (%)	Output Power (dBm)	Turn up (dBm)	Turn-up Scaling Factor	SAR1g Meas.	(W/kg) Scaled	Plot No.	
		GFSK	Front	0	2402	100	9.90	10.5	1.148	0.165	0.189		
	0	GFSK	Back	0	2402	100	9.90	10.5	1.148	0.143	0.164		
Бойу	0	GFSK	Тор	0	2402	100	9.90	10.5	1.148	0.307	0.352	1	
		GFSK	Right	0	2402	100	9.90	10.5	1.148	0.145	0.166		

	WIFI 2.4G												
RF Exposure Conditions	Dist. (mm)	Mode	Test Position	СН.	Freq. (MHz)	Duty Cycle (%)	Output Power (dBm)	Turn up (dBm)	Turn-up Scaling Factor	SAR1g Meas.	(W/kg) Scaled	Plot No.	
Dedu		g	Front	6	2437	100	16.04	16.5	1.112	0.204	0.227		
	0	g	Back	6	2437	100	16.04	16.5	1.112	0.116	0.129		
Бойу	0	g	Тор	6	2437	100	16.04	16.5	1.112	0.265	0.295	2	
		g	Right	6	2437	100	16.04	16.5	1.112	0.127	0.141		

WIFI 5.2G												
RF Exposure Conditions	Dist. (mm)	Mode	Test Position	СН.	Freq. (MHz)	Duty Cycle (%)	Output Power (dBm)	Turn up (dBm)	Turn-up Scaling Factor	SAR1g Meas.	(W/kg) Scaled	Plot No.
Body 0		а	Front	36	5180	100	14.59	15.0	1.099	0.504	0.554	
	0	а	Back	36	5180	100	14.59	15.0	1.099	0.252	0.277	
	0	а	Тор	36	5180	100	14.59	15.0	1.099	0.737	0.810	3
		а	Left	36	5180	100	14.59	15.0	1.099	0.324	0.356	

	WIFI 5.4G												
RF Exposure Conditions	Dist. (mm)	Mode	Test Position	СН.	Freq. (MHz)	Duty Cycle (%)	Output Power (dBm)	Turn up (dBm)	Turn-up Scaling Factor	SAR1g Meas.	(W/kg) Scaled	Plot No.	
Body 0		а	Front	52	5260	100	14.32	15.0	1.169	0.502	0.587		
	0	а	Back	52	5260	100	14.32	15.0	1.169	0.284	0.332		
	0	а	Тор	52	5260	100	14.32	15.0	1.169	0.706	0.826	4	
		а	Left	52	5260	100	14.32	15.0	1.169	0.234	0.274		
						•••							



WIFI 5.6G												
RF Exposure Conditions	Dist. (mm)	Mode	Test Position	CH.	Freq. (MHz)	Duty Cycle (%)	Output Power (dBm)	Turn up (dBm)	Turn-up Scaling Factor	SAR1g Meas.	(W/kg) Scaled	Plot No.
		а	Front	140	5700	100	14.80	15.5	1.175	1.032	1.212	
		а	Back	140	5700	100	14.80	15.5	1.175	0.311	0.365	
Pody	0	а	Тор	140	5700	100	14.80	15.5	1.175	1.026	1.205	
Бойу	0	а	Left	140	5700	100	14.80	15.5	1.175	0.425	0.499	
		а	Front	100	5500	100	14.60	15.5	1.230	0.998	1.228	5
		а	Front	116	5580	100	14.54	15.5	1.247	0.980	1.222	

WIFI 5.8G												
RF	Dist.	Mode	Test	СН	Freq.	Duty Cycle	Output	Turn up	Turn-up Scaling	SAR1g	(W/kg)	Plot
Conditions (mm)	(mm)	Widde	Position	Cn.	(MHz)	(%)	(dBm)	(dBm)	Factor	Meas.	Scaled	No.
		а	Front	149	5745	100	14.67	15.0	1.079	0.943	1.017	
Body 0		а	Back	149	5745	100	14.67	15.0	1.079	0.365	0.394	
	0	а	Тор	149	5745	100	14.67	15.0	1.079	1.096	1.183	
	0	а	Left	149	5745	100	14.67	15.0	1.079	0.432	0.466	
		а	Тор	157	5785	100	14.27	15.0	1.183	0.976	1.155	
		а	Тор	165	5825	100	14.33	15.0	1.167	1.033	1.205	6

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# 14.4 SAR Measurement Variability

According to KDB865664, Repeated measurements are required only when the measured SAR is  $\geq$  0.80 W/kg. If the measured SAR value of the initial repeated measurement is < 1.45 W/kg with  $\leq$  20% variation, only one repeated measurement is required to reaffirm that the results are not expected to have substantial variations, which may introduce significant compliance concerns. A second repeated measurement is required only if the measured result for the initial repeated measurement is within 10% of the SAR limit and vary by more than 20%, which are often related to device and measurement setup difficulties. The following procedures are applied to determine if repeated measurements are required. The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.19 The repeated results, must be clearly identified in the SAR report. All measured SAR, including the repeated results, must be considered to determine compliance and for reporting according to KDB 690783.Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

- 1) When the original highest measured SAR is  $\geq$  0.80 W/kg, repeat 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 ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
- 3) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20

Frequency		quency RF		Repeated	Highest	First Repeated		
Test Mode	Band (MHz)	Exposure Configuration	Test Position	SAR (yes/no)	Measured SAR1-g (W/Kg)	Measured SAR1-g (W/Kg)	Largest to Smallest SAR Ratio	
WIFI 5.6G	5500	Body	Back	yes	0.998	0.943	1.058	
WIFI 5.8G	5825	Body	Back	yes	1.033	0.992	1.041	

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# 14.5 Simultaneous Transmission Evaluation

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmiting antenna.

### Application Simultaneous Transmission information:

No.	Configurations	Body SAR
1	WIFI2.4G + WIFI5G	No
2	WIFI2.4G + Bluetooth	No
3	WIFI5G + Bluetooth	Yes

#### Remark:

1. Wi-Fi 2.4GHz and Wi-Fi 5GHz cannot transmit simultaneously.

2. WIFI2.4G and Bluetooth are the same antenna and cannot be sent at the same time.

3. According to the KDB 447498 D01 v06, 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:

• (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,

mm)]·[ $\sqrt{f(GHz)/x}$ ] W/kg for test separation distances  $\leq$  50 mm;

where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

• 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is > 50 mm

Estimated stand alone SAR						
Communication system	Frequency (MHz)	Maximum Power (dBm)	Maximum Power (mW)	Separation Distance (mm)	х	Estimated SAR1-g (W/kg)
/	/	/	/	5	7.5	/
/	/	/	/	10	7.5	/

Note:

- 1. Maximum average power including tune-up tolerance;
- 2. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4. Per FCC KD B447498 D01, simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the transmitting antenna in a specific a physical test configuration is  $\leq$ 1.6 W/Kg. When the sum is greater than the SAR limit, SAR test exclusion is determined by the SAR to peak location separation ratio.

Ratio= $\frac{(SAR_1+SAR_2)^{1.5}}{(\text{peak location separation,mm})} < 0.04$ Page 38 of 105

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DE Expectire	Test	Stand	lalone SAR (V	Summed SAR W/kg)	
Conditions	Position	1	2	3	2.2
		WIFI 2.4G	WIFI 5G	Bluetooth	2+3
	Front	0.227	1.228	0.189	1.417
	Back	0.129	0.394	0.164	0.558
Pody	Тор	0.295	1.205	0.352	1.557
Боау	Bottom	/	/	/	/
	Left	/	0.499	/	0.499
	Right	0.141	/	0.166	0.166

5. Simultaneous transmission of maximum SAR sum calculation.

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# 15. Test Plots

# 15.1 System Performance Check

# System check at 2450 MHz

### A. Experimental conditions.

Probe	SN 26/23 EPGO420
ConvF	1.11
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x8,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels	Middle
Signal	CW (Crest factor: 1.0)

### **B. Permitivity**

Frequency (MHz)	2450.000
Relative permitivity (real part)	40.606
Relative permitivity (imaginary part)	13.984
Conductivity (S/m)	1.867
Relative permitivity (imaginary part) Conductivity (S/m)	13.984 1.867

# C. SAR Surface and Volume



Maximum location: X=-2.00, Y=0.00 ; SAR Peak: 4.96 W/kg

# <u>D. SAR 1g & 10g</u>

<u>D: OAR 19 a 109</u>	
SAR 10g (W/Kg)	6,108
SAR 1g (W/Kg)	13.740
Variation (%)	3.091
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000

# E. Z Axis Scan

Z (mm)	0.00	4.00	8.00	12.00 16.00
SAR (W/Kg)	2.832	2.176	1.674	1.285 1.064



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# System check at 5200 MHz

# A. Experimental conditions.

Probe	SN 26/23 EPGO420
ConvF	1.18
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x8,dx=5mm dy=5mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW (Crest factor: 1.0)

#### **B.** Permitivity

Frequency (MHz)	5200.000
Relative permitivity (real part)	34.716
Relative permitivity (imaginary part)	16.154
Conductivity (S/m)	4.548



Maximum location: X=1.00, Y=0.00 ; SAR Peak: 5.68 W/kg

#### D. SAR 1g & 10g

SAR 10g (W/Kg)	7,815
SAR 1g (W/Kg)	19.004
Variation (%)	1.197
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000
<u>E. Z Axis Scan</u>	

# E. Z Axis Scan

<u>E. Z Axis S</u>	<u>can</u>		
Z (mm)	0.00	4.00	8.00 12.00 16.00
SAR (W/Kg)	3.108	2.344	1.786 1.395 1.109



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# System check at 5400 MHz

# A. Experimental conditions.

Probe	SN 26/23 EPGO420
ConvF	1.18
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x8,dx=5mm dy=5mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5400
Channels	Middle
Signal	CW (Crest factor: 1.0)

#### **B.** Permitivity

Frequency (MHz)	5400.000
Relative permitivity (real part)	34.593
Relative permitivity (imaginary part)	17.082
Conductivity (S/m)	4.804

# C. SAR Surface and Volume



Maximum location: X=0.00, Y=1.00 ; SAR Peak: 22.78 W/kg

### D. SAR 1g & 10g

SAR 10g (W/Kg)	8.971
SAR 1g (W/Kg)	19.416
Variation (%)	-2,421
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000
<u>E. Z Axis Scan</u>	

### E. Z Axis Scan

<u>E. Z Axis S</u>	can		
Z (mm)	0.00	4.00	8.00 12.00 16.00
SAR (W/Kg)	18.711	11.234	6.561 3.924 2.453



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# System check at 5600 MHz

### A. Experimental conditions.

Probe	SN 26/23 EPGO420
ConvF	1.20
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x8,dx=5mm dy=5mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5600
Channels	Middle
Signal	CW (Crest factor: 1.0)

### **B.** Permitivity

Frequency (MHz)	5600.000
Relative permitivity (real part)	34.797
Relative permitivity (imaginary part)	16.911
Conductivity (S/m)	5.046

# C. SAR Surface and Volume



Maximum location: X=1.00, Y=1.00 ; SAR Peak: 22.54 W/kg

# D. SAR 1a & 10a

SAR 10g (W/Kg)	8.760
SAR 1g (W/Kg)	19.963
Variation (%)	-4.237
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000
<u>E. Z Axis Scan</u>	

# E. Z Axis Scan

<u>E. Z Axis S</u>	can				
Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	17.387	10.484	6.206	3.672	2.184

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# System check at 5800 MHz

# A. Experimental conditions.

Probe	SN 26/23 EPGO420
ConvF	1.15
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x8,dx=5mm dy=5mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW (Crest factor: 1.0)

### **B.** Permitivity

Frequency (MHz)	5800.000
Relative permitivity (real part)	35.924
Relative permitivity (imaginary part)	15.906
Conductivity (S/m)	5.182

# C. SAR Surface and Volume



<u>D. SAR 1g &amp; 10g</u>	$\sim \sim $
SAR 10g (W/Kg)	8.060
SAR 1g (W/Kg)	19.806
Variation (%)	4.376
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000

# E. Z Axis Scan

SAR (W/Kg) 31.172 16.108 7.982 3.835	Z (mm)	0.00	4.00	8.00	12.00 16.00	11111
	SAR (W/Kg)	31.172	16.108	7.982	3.835 1.964	

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# 15.2 SAR Test Graph Results

# Plot 1

### A. Experimental conditions.

Probe	SN 26/23 EPGO420
ConvF	1.11
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	Bluetooth
Channels	Lower (0)
Signal	Bluetooth (Crest factor: 1.0)

# **B.** Permitivity

2402.000
40,606
40:000
10.011
13.211
1 007
1.867

# C. SAR Surface and Volume



Maximum location: X=8.00, Y=-35.00 ; SAR Peak: 0.66 W/kg

### D. SAR 1g & 10g

SAR 10g (W/Kg)	0.155
SAR 1g (W/Kg)	0.307
Variation (%)	-2.690
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000
E 7 Avis Scan	

# E. Z Axis Scan

<u>E. Z Axis S</u>	can		****************		
Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.625	0.316	0.127	0.062	0.051

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# Plot 2

A. Experimental conditions.	
Probe	SN 26/23 EPGO420
ConvF	1.11
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	IEE802.g
Channels	Middle (1)
Signal	Custom (Crest factor: 1.0)

### **B.** Permitivity

Frequency (MHz)	2437.000
Relative permitivity (real part)	40.606
Relative permitivity (imaginary part)	13.207
Conductivity (S/m)	1.867

# C. SAR Surface and Volume

SURFACE SAR		VOLUME SAR	
	9 02 78	-	W/kg 0.255 0.224
	53 29 04 80 55 31 06		0.192 0.161 0.130 0.099 0.067 0.036 0.005

Maximum location: X=8.00, Y=-12.00 ; SAR Peak: 0.65 W/kg

### D. SAR 1g & 10g

SAR 10g (W/Kg)	0.125
SAR 1g (W/Kg)	0.265
Variation (%)	2.390
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000
<u>E. Z Axis Scan</u>	

### E. Z Axis Scan

<u>E. Z Axis S</u>	<u>can</u>				
Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.611	0.255	0.067	0.019	0.015



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# Plot 3

A. Experimental conditions.	
Probe	SN 26/23 EPGO420
ConvF	1.18
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2m
Phantom	Validation plane
Device Position	Body
Band	5200
Channels	Lower (0)
Signal	Custom (Crest factor: 1.0)

#### **B.** Permitivity

Frequency (MHz)	5180.000
Relative permitivity (real part)	34.716
Relative permitivity (imaginary part)	16.130
Conductivity (S/m)	4.548



Maximum location: X=-5.00, Y=0.00 ; SAR Peak: 1.49 W/kg

# D. SAR 1g & 10g

SAR 10g (W/Kg)	0.358
SAR 1g (W/Kg)	0.737
Variation (%)	-3.760
Horizontal validation criteria: minimum distance (mm)	0.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	0.000000
E. Z Axis Scan	

#### E. Z Axis Scan

<u>E. Z Axis S</u>	<u>ican</u>								
Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00
SAR (W/Kg)	1.764	0.827	0.738	0.608	0.377	0.324	0.597	0.015	0.132

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