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**SAR Evaluation on
2.45 GHz Spread Spectrum Cordless Phone
Model: G4010
FCC ID: K7G2G4DSSG4NNN**

**For
Intertek Testing Services Hong Kong Ltd
to
FCC OET Bulletin 65 – Supplement C (Edition 01-01)**

Report Number: M020404

Issue Date: 30th April 2002

**This report is not an endorsement of the subject product.
The results within apply to the test sample as tested.**

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SAR EVALUATION
Giant Electronics Spread Spectrum Cordless Phone
Model: G4010
Report Number: M020404
FCC ID: K7G2G4DSSG4NNN

1.0 GENERAL INFORMATION

Test Sample: 2.4 GHz Spread Spectrum Cordless Phone

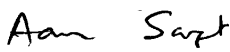
Model Number: G4010
FCC ID: K7G2G4DSSG4NNN
Manufacturer: Giant Electronics Ltd
Address: 7/F., Elite Industrial Building, 135-137 Hoi Bun Road, Kwun Tong, Hong Kong

Phone: +852-27973363
Fax: +852-23436224

Test Standard/s: Evaluating Compliance with FCC Guidelines For Human Exposure to Radiofrequency Electromagnetic Fields
Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01)

Test Dates: 12th April to 23rd April 2002

Tested for: Intertek Testing Services Hong Kong Ltd
Address: 2/F, Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong

Test Officer: 

Aaron Sargent
B.Eng

Authorised Signature: 

Chris Zombolas
Technical Director, EMC Technologies Pty Ltd

SAR EVALUATION

Giant Electronics Spread Spectrum Cordless Phone

Model: G4010

Report Number: M020404

2.0 DESCRIPTION OF DEVICE

2.1 Description of Test Sample

The phone tested was a Giant Electronics Spread Spectrum Cordless Phone operating in the 2450 MHz frequency band. It has an integral antenna.

2.2 Test Signal, Frequency and Output Power

The Cordless Phone was put in operation utilizing software provided by Intertek services. To avoid field probe sampling time incompatibility issues, a serial connection between the cordless phone and a PC was used to control the transmit channel of the EUT. This maintained a maximum output signal from the EUT within the frequency range 2400-2480MHz. The fixed frequency channels tested in the measurements were the traffic channels shown in the table below. The SAR levels of the test sample were measured for the 2450 MHz frequency band of operation. There were wires or other connections to the Cordless phone during the SAR measurements.

Channel	Channel Frequency MHz	Conducted Output Power
00	2401.05	128mW
30	2448.58	119mW
59	2477.97	114mW

2.3 Battery Status

The phone battery was fully charged prior to commencement of measurement. Each SAR test was completed within 30 minutes. The battery condition was monitored by measuring the RF power at a defined position inside the phantom before the commencement of each test and again after the completion of the test.

Battery Details: Ni-MH Battery

Type: Nickel Metal Hydride
Rechargeable Battery
P/N: GP60AAAH3BMX
3.6V 600mAh

2.4 Modulation scheme

The Modulation scheme was Digital Spread Spectrum.

2.5 Details Of Test Laboratory

Location

EMC Technologies Pty Ltd - ACN/ABN: 82057105549
57 Assembly Drive
Tullamarine, Victoria
Australia 3043

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Accreditations

EMC Technologies Pty. Ltd. is accredited by the National Association of Testing Authorities, Australia (NATA). **NATA Accredited Laboratory Number: 5292**

EMC Technologies Pty Ltd is NATA accredited for the following standards:

AS/NZS 2772.1:	RF and microwave radiation hazard measurement
ACA:	Electromagnetic Radiation Human Exposure Standard
FCC:	Guidelines for Human Exposure to RF Electromagnetic Field
CENELEC:	ES59005

Refer to NATA website www.nata.asn.au for the full scope of accreditation.

Environmental Factors

The temperature in the laboratory was controlled to within $\pm 1^\circ\text{C}$. The measurements were performed in a shielded room with no background network signals. The liquid parameters were measured prior to the commencement of each test. Tests were performed to check that reflections within the environment did not influence the SAR measurements. To reduce the possible effect of reflections, ferrite-absorbing panels were used around the phantom.

3.0 DESCRIPTION OF SAR MEASUREMENT SYSTEM

3.1 Probe Positioning System

The measurements were performed with the automated near-field scanning system DASY3 from Schmid & Partner Engineering AG (SPEAG), also known as the Kuster System. The Generic Twin Phantom from SPEAG was used for this evaluation. The system is based on a high precision 6 axis robot (working range greater than 1.1m), which positions the SAR measurement probes with a positional repeatability of better than ± 0.02 mm.

3.2 E-Field Probe Type and Performance

The SAR measurements were conducted with the dosimetric probe ET3DV6 Serial: 1377 (manufactured by SPEAG) designed in the classical triangular configuration and optimised for dosimetric evaluation. The probe has been calibrated and found to be accurate to better than ± 0.25 dB. The probe is suitable for measurements close to material discontinuity at the surface of the phantom. The sensors of the probe are directly loaded with Schottky diodes and connected via highly resistive lines (length = 300 mm) to the data acquisition unit.

3.3 Calibration and Validation Procedures and Data

Calibration of the probe at 2.45 GHz was performed by SPEAG. Prior to the SAR assessment, the system validation kit was used to verify that DASY3 was operating within its specifications. System validation was performed at 1800 MHz for the SPEAG specified reference liquid as shown below.

System validation is performed by feeding a known power level into a reference dipole, set at a known distance from the phantom. The measured SAR is compared to the theoretically derived value. If the measured SAR exceeds a tolerance of 5%, the cause of the problem is investigated and the measurement is repeated.

Frequency	ϵ_r (measured)	σ (mho/m) (measured)	Power Into Antenna	Measured SAR 1g	Measured SAR 10g
1800MHz	38.7	1.70	238mW	9.2 mW/g	4.65 mW/g

Measured SAR 1g Deviation: 4.76%

Measured SAR 10g Deviation: -0.32%

3.4 Phantom Properties (Size, Shape, Shell Thickness, Tissue Material Properties)

The phantom used was the "Homogeneous Generic Twin Phantom" from SPEAG. It has a thickness of 2.0 mm and was filled with a brain tissue simulating liquid. The ear was simulated by means of a spacer to give spacing of 6.0 mm between the earpiece of the phone and the tissue simulating liquid.

The dielectric parameters of the brain simulating liquid were measured prior to SAR assessment using the HP85070A dielectric probe kit and HP8714B Network Analyser. The actual dielectric parameters are shown in the following table.

Table 1: Measured Dielectric Values

Frequency Band	ϵ_r (measured)	ϵ_r (target)	σ (mho/m) (measured)	σ (target)	ρ kg/m ³
2450 MHz Brain	43.0	39.2 $\pm$ 10% (35.28 to 43.12)	1.75	1.80 $\pm$ 10% (1.62 to 1.98)	1000

The same liquid was used for the muscle and brain simulations. The brain liquid parameters were within the required tolerances of $\pm$ 10%. The muscle liquid conductivity was 1.80, which was within the target range required value of 1.95. The muscle liquid permittivity value was 43.0, which was below the target value of 52.7. The lower permittivity for the simulated muscle tissue will over-estimate the result giving a more conservative SAR value.

3.5 Simulated Tissue Properties Used for SAR Test

Tissue Type: Brain

Tissue Type: Brain	
Ingredients	% by Weight
Distilled Water	62.7
Salt	0.25
Triton X-100	36.8

*Refer "OET Bulletin 65 97/01 P38"

4.0 SAR MEASUREMENT PROCEDURE USING DASY3

The SAR evaluation was performed with the SPEAG DASY3 system. A summary of the procedure follows:

- A measurement of the SAR value at a fixed location above the ear point is used as a reference value for assessing the power drop of the phone. The SAR at this point is measured at the start of the test and then again at the end of the test.
- The SAR distribution at the exposed side of the head is measured at a distance of 3.9 mm from the inner surface of the shell. The area covers the entire dimension of the head and the horizontal grid spacing is 20 mm x 20 mm. Based on this data, the area of the maximum absorption is determined by Spline interpolation.
- Around this point, a volume of 32 mm x 32 mm x 34 mm is assessed by measuring 5 x 5 x 7 points. On the basis of this data set, the spatial peak SAR value is evaluated with the following procedure:

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- (i) The data at the surface are extrapolated, since the centre of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation is based on a least square algorithm. A polynomial of the fourth order is calculated through the points in zaxes. This polynomial is then used to evaluate the points between the surface and the probe tip.
- (ii) The maximum interpolated value is searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) are computed using the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one-dimensional splines with the "Not a knot"- condition (in x, y and zdirection). The volume is integrated with the trapezoidal – algorithm. One thousand points (10 x 10 x 10) are interpolated to calculate the averages.
- (iii) All neighbouring volumes are evaluated until no neighbouring volume with a higher average value is found.
- (iv) The SAR value at the same location as in Step (a) is again measured (If the value changes by more than 5%, the entire measurement is repeated.)

Equipment List and Calibration Details

Equipment Type	Manufacturer	Model Number	Serial Number	Calibration Due
Robot - Six Axes	Staubli	RX90BL	N/A	Not applicable
Robot Remote Control	Schmid & Partner Engineering AG	CS7MB	RX90B	Not applicable
Generic Twin Phantom	Schmid & Partner Engineering AG	N/A	N/A	Not applicable
Data Acquisition Electronics	Schmid & Partner Engineering AG	DA E3 V1	442	22 May 02
Probe E-Field - Dummy	Schmid & Partner Engineering AG	DP1	N/A	Not applicable
Probe E-Field	Schmid & Partner Engineering AG	ET3DV6	1377	29 –Jun-02
Antenna Dipole 900 MHz	Schmid & Partner Engineering AG	D900V2	047	12-Dec-02
RF Amplifier 600 MHz to 1100 MHz, 5W	Radio Technology	PAL1850-30B	813	Not applicable
Synthesized signal generator	Hewlett Packard	8662A	2222A00956	In test
RF Power Meter Dual	Giga-Tronics	8542B	1830125	21-May-02
RF Power Sensor 0.01 - 18 GHz	Giga-Tronics	80301A	1828782	21-May-02
RF Power Sensor 0.01 - 18 GHz	Giga-Tronics	80301A	1828805	21-May-02
Dual Directional Coupler	Hewlett Packard	778D	1144A04700	13-Aug-02
Spectrum Analyzer 9 kHz - 22 GHz	Hewlett Packard	8593EM	3412A00105	06-Apr -02

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4.1 Description of the Test Positions (Left and Right Hand Side)

SAR measurements were performed in the “Touch”, “Tilted” and “Body Worn” positions. The SAR evaluations were performed on both left and right hand side of both the “Touch Position” and the “Tilted Position”. The “Body Worn” position was measured in the flat section of the phantom.

“Touch” Position: The device was positioned with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, the vertical centre line was aligned with the reference plane containing the three ear and mouth reference points. (Left Ear, Right Ear and Mouth). The centre of the earpiece was then aligned with the Right Ear and Left Ear.

The phone was then moved towards the phantom with the earpiece aligned with the line between the Left Ear and the Right Ear, until the phone just touched the ear. With the device maintained in the reference plane, and the phone in contact with the ear, the bottom of the phone was moved until the front side of the phone was in contact with the cheek of the phantom, or until contact with the ear was lost.

“Tilted” Position: The device was positioned in the “cheek” position described above. While maintaining the device in the reference plane described above, and pivoting against the ear, the device was moved away from the mouth by an angle of 15 degrees or until contact with the ear was lost.

“Body Worn” Position: The device was tested in the flat section of the phantom for the “body worn” position. A separation distance of 1.5cm was maintained between the back of the device and the flat section of the phantom. The spacer was made of low dielectric loss foam.

4.2 List of All Test Cases (Antenna In/Out, Test Frequencies, User Modes etc)

The device has a fixed antenna. The SAR was measured at three test channels with the test sample operating at maximum power, as specified in section 2.2.

4.3 FCC RF Exposure Limits for Un-controlled/Non – occupational

Spatial Peak SAR Limits For:	
Head:	1.6 mW/g (averaged over any 1g cube of tissue)
Hands, Wrists, Feet and Ankles	4.0 mW/g (averaged over 10g cube of tissue)

5.0 MEASUREMENT UNCERTAINTY

Table 2: Uncertainty Budget for DASY3

Uncertainty Description	Error	Distrib.	Weight	Std. Dev.	Offset
Probe Uncertainty					
axial isotropy	±0.2 dB	U-shaped	0.5	±2.4%	
Spherical isotropy	±0.4 dB	U-shaped	0.5	±4.8%	
Isotropy from gradient	±0.5 dB	U-shaped	0		
Spatial resolution	±0.5%	normal	1	±0.5%	
Linearity error	±0.2 dB	rectang.	1	±2.7%	
Calibration error	±3.3%	normal	1	±3.3%	
SAR Evaluation Uncertainty					
Data acquisition error	±1%	rectang.	1	±0.6%	
ELF and RF disturbances	±0.25%	normal	1	±0.25%	
Conductivity assessment	±10%	rectang.	1	±5.8%	
Spatial Peak SAR Evaluation Uncertainty					
Extrapol boundary effect	±3%	normal	1	±3%	5%
Probe positioning error	±0.1mm	normal	1	±1%	
Integrat. and cube orient	±3%	normal	1	±3%	
Cube shape inaccuracies	±2%	normal	1	±1.2%	
Device positioning	±6%	normal	1	±6%	
Combined Uncertainties				± 11.7%	± 5%

Estimated total measurement uncertainty for the DASY3 measurement system was ±11.7%. The extended uncertainty (K = 2) was assessed to be ±23.5% based on 95% confidence level. The uncertainty is not added to the measurement result. These values apply to 1800 MHz tests. The actual values for 2450 MHz may be a little higher, but should still be within 30%

6.0 SAR EVALUATION RESULTS

The SAR values averaged over 1 g and 10 g tissue masses were determined for the sample device for the left- and right-hand configurations of the phantom. The results are given in Table 3 (2450 MHz).

The plots with the corresponding SAR distributions, which reveal information about the location of the maximum SAR with respect to the device, are contained in Appendix B of this report.

Table 3: SAR Measurement Results – 2450 MHz

Test Position	Plot No.	Test Channel	Test Freq (MHz)	SAR Level for (1g)	SAR Level for (10g)
Touch Position Left side	1	1	2401.05	0.0613	0.0376
	2	2	2448.58	0.0635	0.0381
	3	3	2477.97	0.0176	0.0084
Touch Position Right Side	4	1	2401.05	0.0653	0.0396
	5	2	2448.58	0.0323	0.0159
	6	3	2477.97	0.0558	0.0329
Tilted Position Left Side	7	1	2401.05	0.0732	0.0388
	8	2	2448.58	0.0249	0.0119
	9	3	2477.97	0.0192	0.0090
Tilted Position Right Side	10	1	2401.05	0.0715	0.0384
	11	2	2448.58	0.0729	0.0392
	12	3	2477.97	0.0605	0.0322
Belt Clip Position 1.5cm Spacing	13	1	2401.05	0.171	0.0933
	14	2	2448.58	0.139	0.0769
	15	3	2477.97	0.113	0.0623

Note: The uncertainty of the system has not been added to the result. The results for the belt clip position were over estimated due to the lower permittivity used for the muscle tissue liquid.

The maximum measured SAR level at the head position was 0.0732 mW/g for a 1gram cube of tissue. The maximum SAR for the waist (belt clip) position (1.5cm spacer) was and 0.171 mW/g for a 1 gram cube of tissue.

The test limit set by the FCC is 1.6 mW/g for a 1g cube of tissue for the head and belt clip positions.

7.0 COMPLIANCE STATEMENT

The Giant Electronics Ltd Model G4010 FCC ID: K7G2G4DSSG4NNN 2.4 GHz Spread Spectrum Cordless Phone was found to comply with the FCC SAR requirements.

The highest SAR levels recorded for the 2400 MHz Band was 0.171 mW/g for the belt clip position. This was below the limit of 1.6 mW/g, even taking the measurement uncertainty into account.

APPENDIX A1 TEST SAMPLE PHOTOGRAPHS



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APPENDIX A2 TEST SET UP PHOTOGRAPHS

Touch Position Right

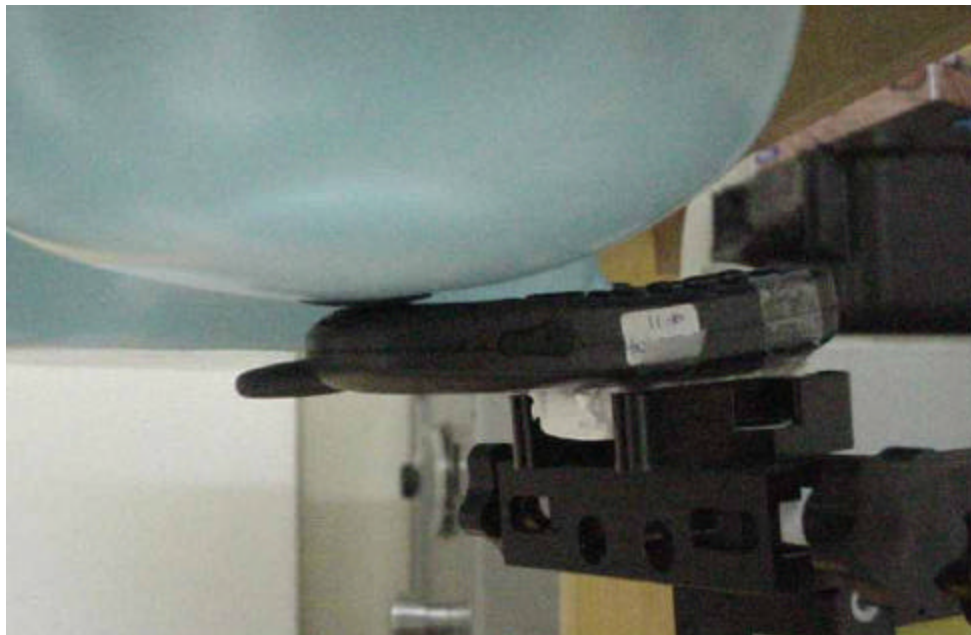


Touch Position Left



APPENDIX A3 TEST SET UP PHOTOGRAPHS

Tilted Position

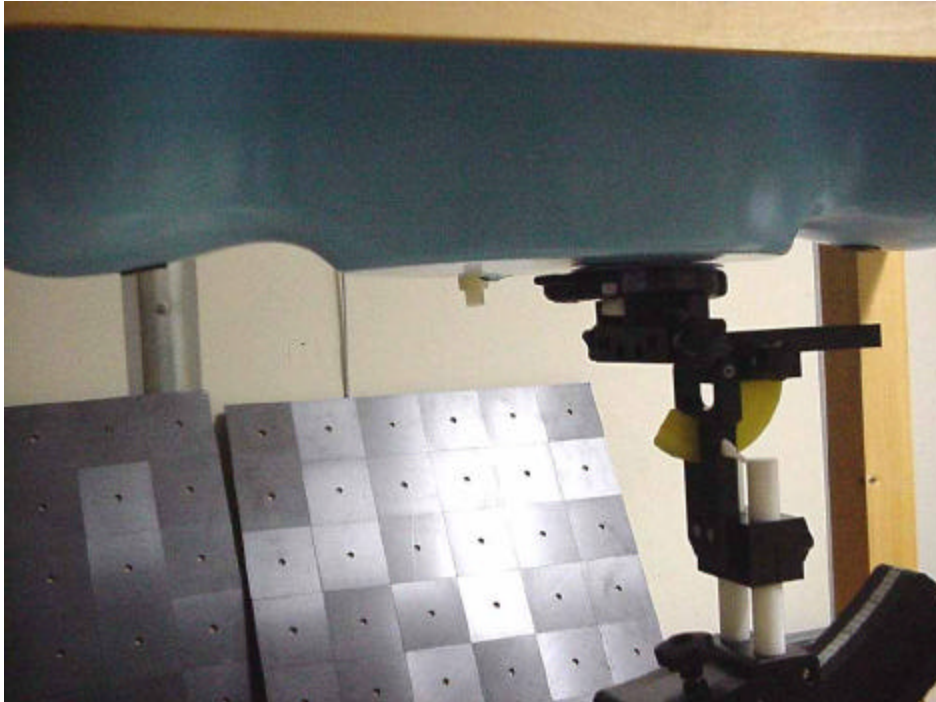


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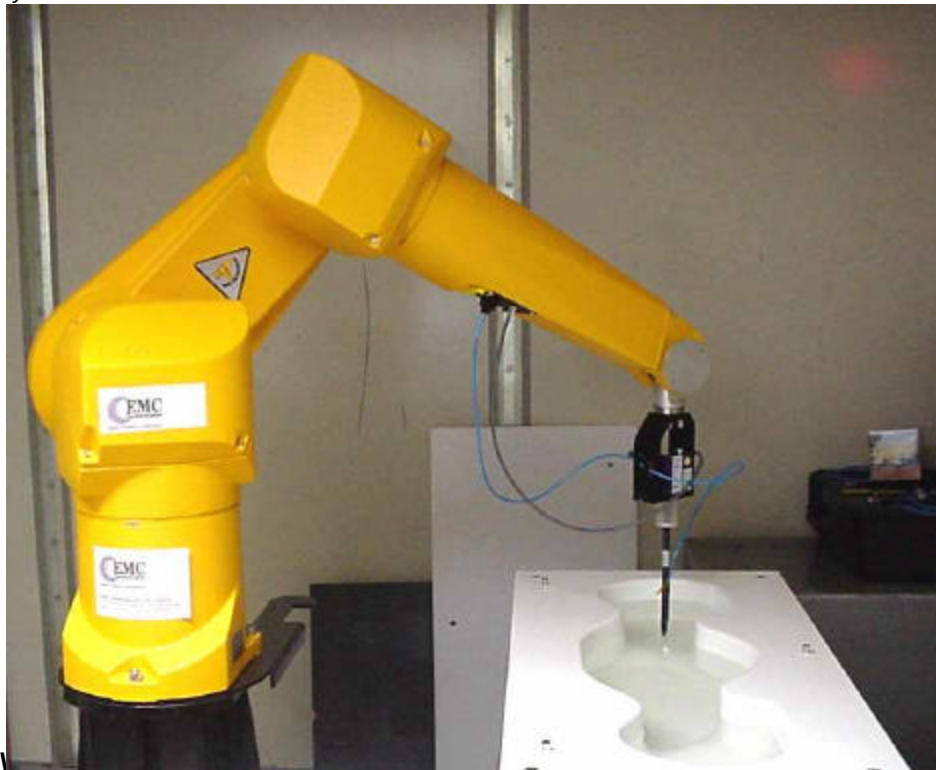
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APPENDIX A4 TEST SET UP PHOTOGRAPHS

Belt Clip Position



DASY3 System



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APPENDIX B

PLOTS OF THE SAR MEASUREMENTS

Plots of the measured SAR distributions inside the phantom are given in this Appendix for all tested configurations. The spatial peak SAR values were assessed with the procedure described in this report.

Note: The graphical visualisation of the phone position onto the plot of the SAR distribution gives only limited information on the RF current distribution on the surface of the device, since the curvature of the head causes graphical distortion.

Table 3 contains a numbered list of the SAR plots.

2450 MHz SAR Results

Plot 1	Touch Left	Channel 1
Plot 2	Touch Left	Channel 2
Plot 3	Touch Left	Channel 3
Plot 4	Touch Right	Channel 1
Plot 5	Touch Right	Channel 2
Plot 6	Touch Right	Channel 3
Plot 7	Tilted Left	Channel 1
Plot 8	Tilted Left	Channel 2
Plot 9	Tilted Left	Channel 3
Plot 10	Tilted Right	Channel 1
Plot 11	Tilted Right	Channel 2
Plot 12	Tilted Right	Channel 3
Plot 13	Body Worn Position	Channel 1
Plot 14	Body Worn Position	Channel 2
Plot 15	Body Worn Position	Channel 3

M020404 - Intertek - Touch Position Left - CH#00 #2

Giant Electronics G4010

Generic Twin 2 Phantom; Left Hand Section; Position: (70°,65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

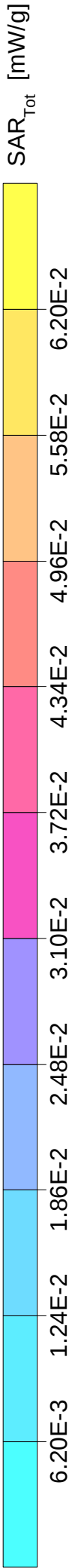
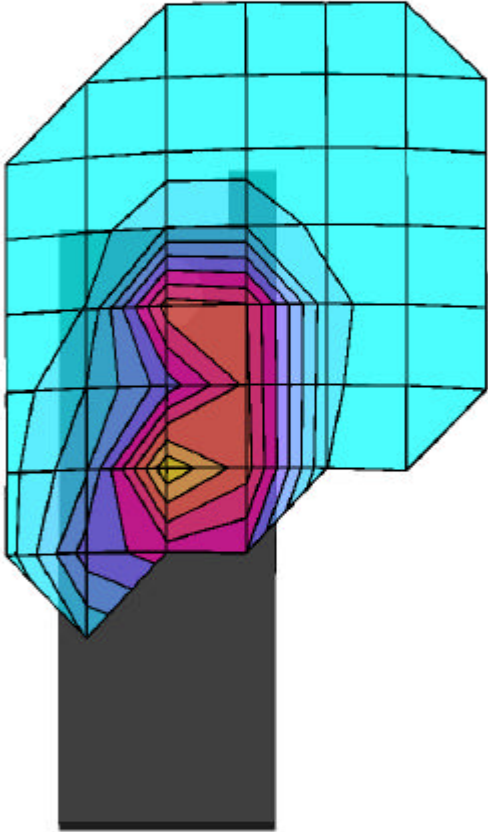
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.75 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0613 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0376 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: 0.03 dB



SAR Measurement Plot 1

M020404 - Intertek - Touch Position Left - CH#30 #2

Giant Electronics G4010

Generic Twin 2 Phantom; Left Hand Section; Position: (70°,65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

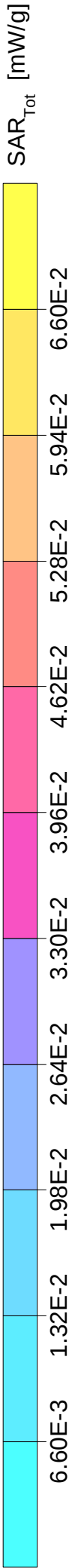
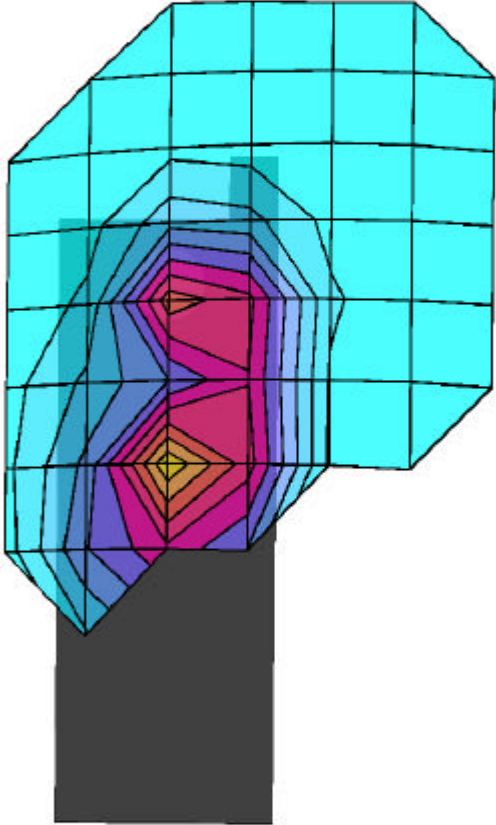
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.76 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0635 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0381 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.22 dB



SAR Measurement Plot 2

M020404 - Intertek - Touch Position Left - CH#59

Giant Electronics G4010

Generic Twin 2 Phantom; Left Hand Section; Position: (70°,65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

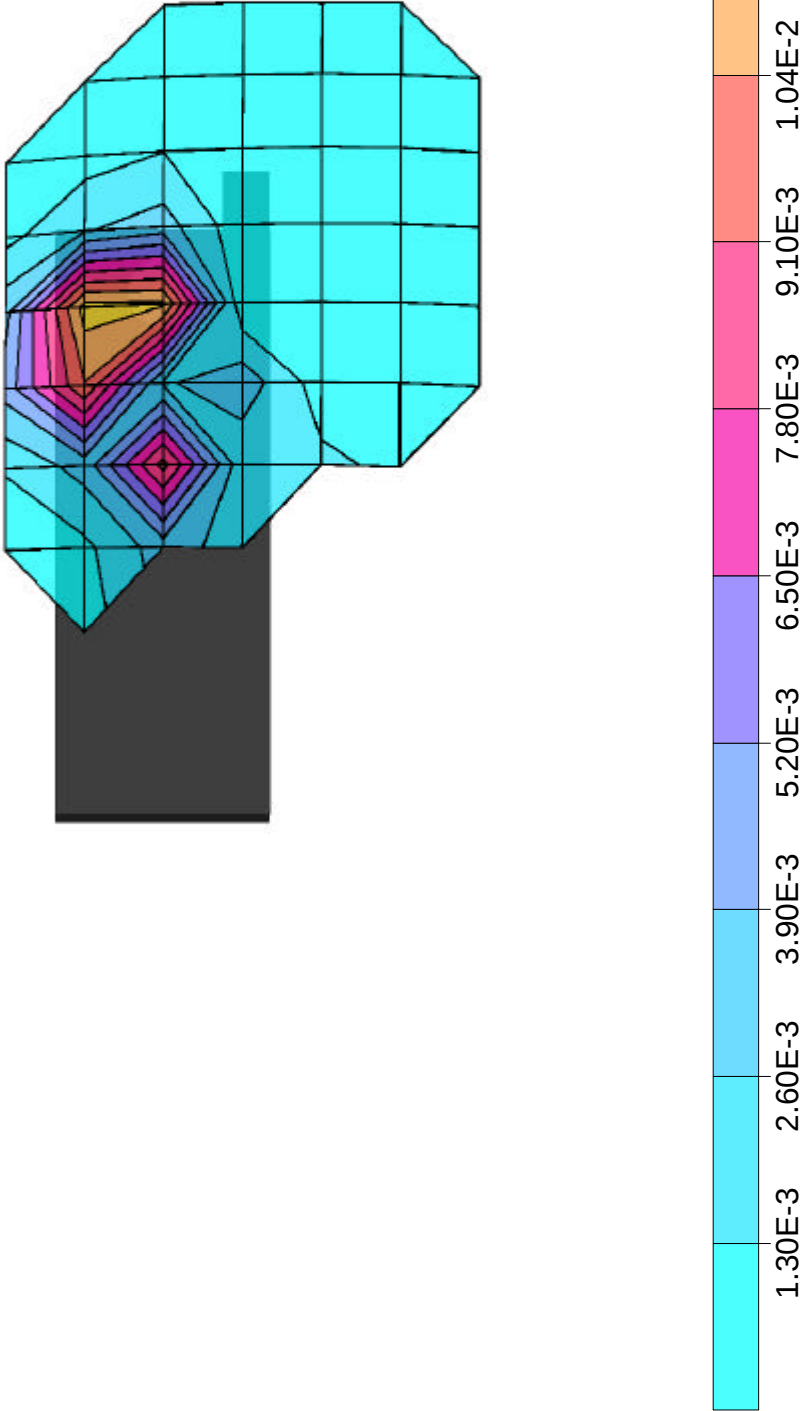
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.75 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0176 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0084 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.09 dB



SAR Measurement Plot 3

M020404 - Intertek - Touch Position Right - CH#00 #2

Giant Electronics G4010

Generic Twin 2 Phantom; Right Hand Section; Position: (70°, 65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

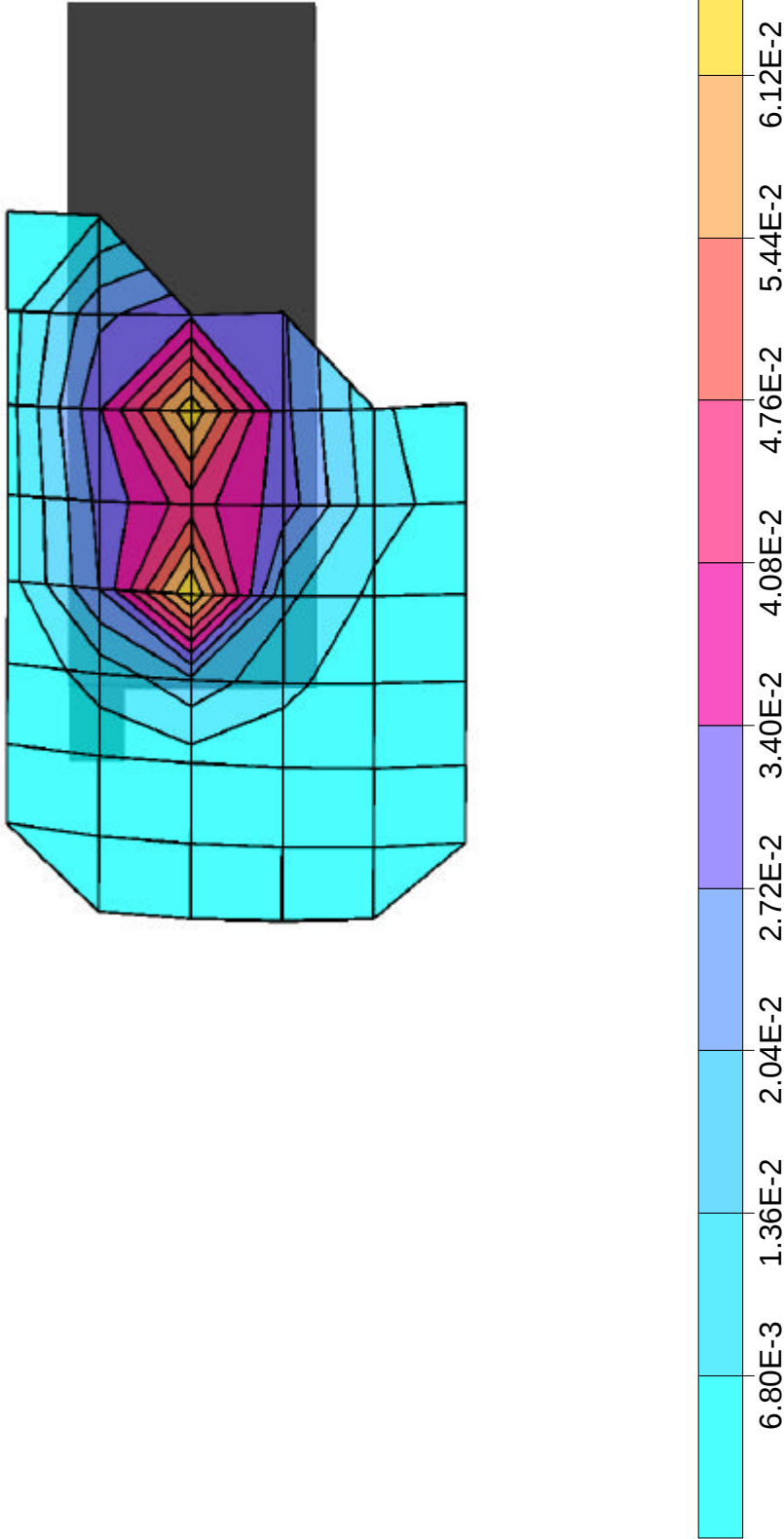
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.76 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0653 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0396 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.09 dB



SAR Measurement Plot 4

M020404 - Intertek - Touch Position Right - CH#30 #2

Giant Electronics G4010

Generic Twin 2 Phantom; Right Hand Section; Position: (70°, 65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

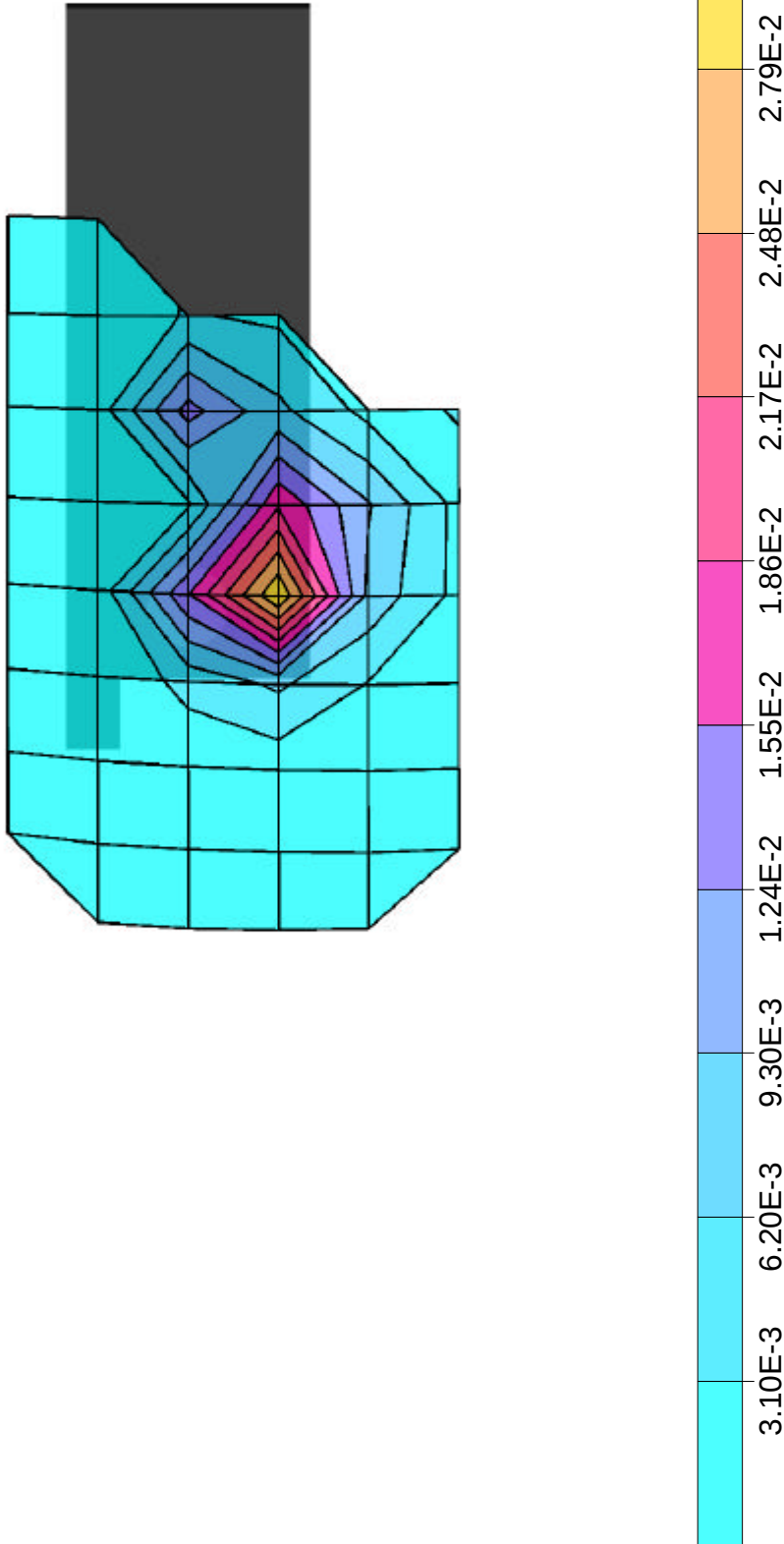
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.76 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0323 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0159 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: 0.15 dB



SAR Measurement Plot 5

M020404 - Intertek - Touch Position Right - CH#59

Giant Electronics G4010

Generic Twin 2 Phantom; Right Hand Section; Position: (70°, 65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

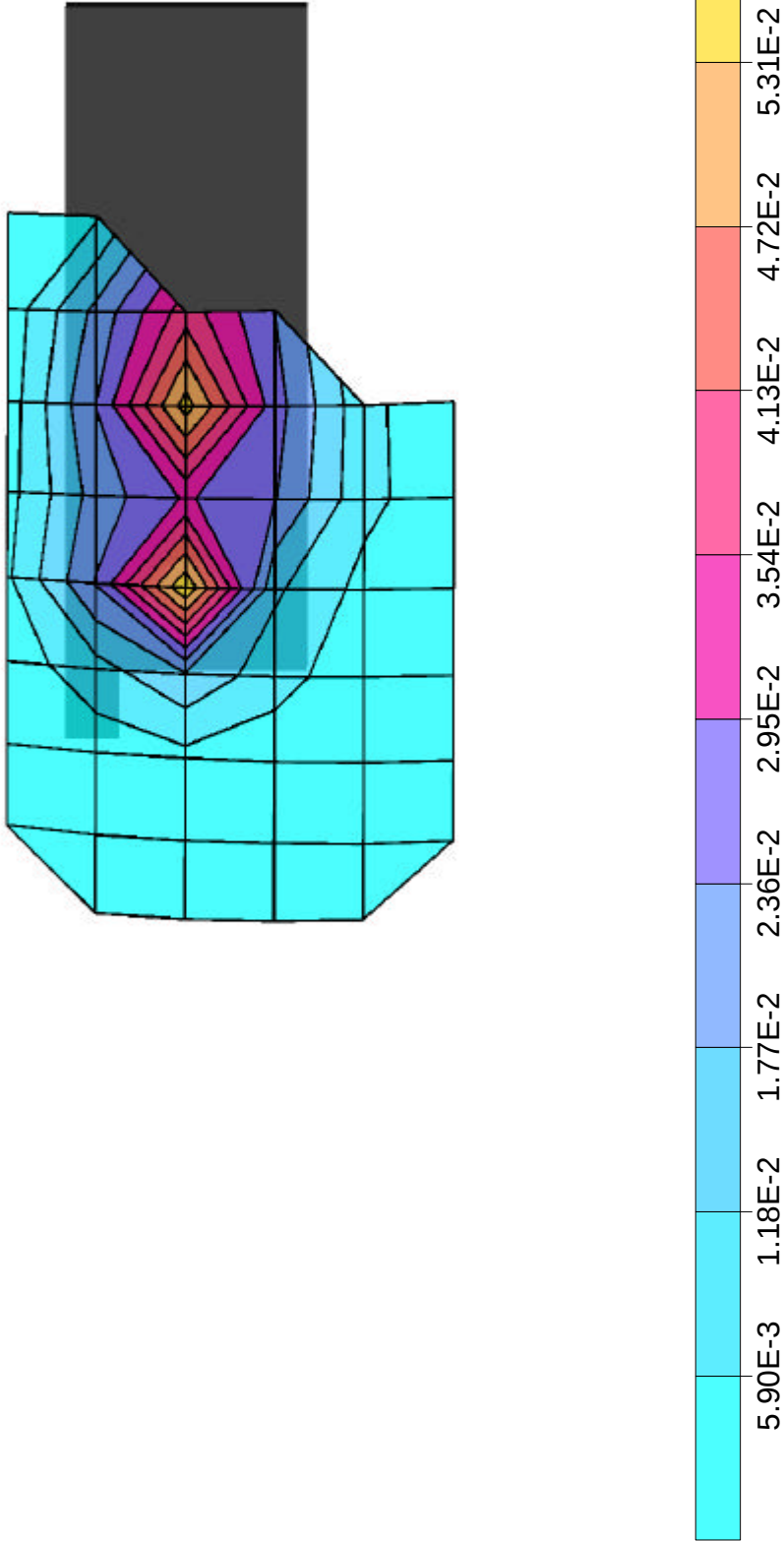
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.76 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0558 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0329 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.11 dB



SAR Measurement Plot 6

M020404 - Intertek - Tilted Position Left - CH#00

Giant Electronics G4010

Generic Twin 2 Phantom; Left Hand Section; Position: (85°,65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

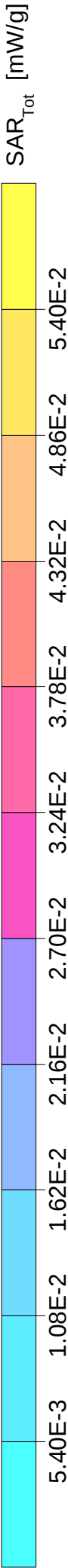
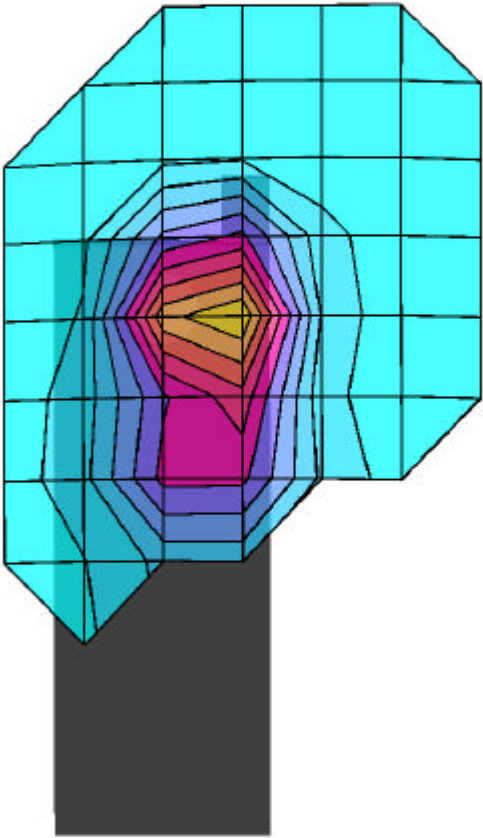
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.70$ mho/m $\epsilon_r = 43.0$ $\rho = 1.00$ g/cm³

Cube 5x5x7: SAR (1g): 0.0732 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0388 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.30 dB



SAR Measurement Plot 7

M020404 - Intertek - Tilted Position Left- CH#30 #3

Giant Electronics G4010

Generic Twin 2 Phantom; Left Hand Section; Position: (85°,65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

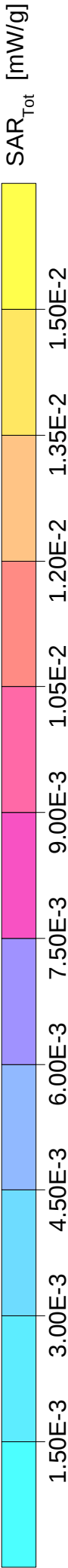
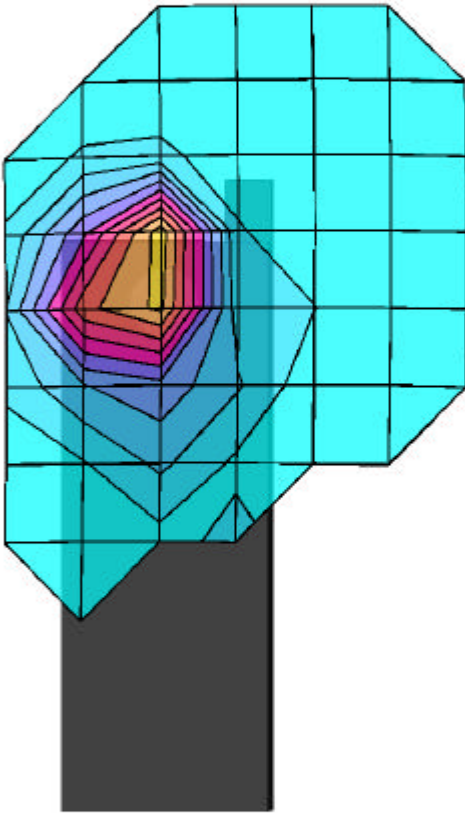
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.70$ mho/m $\epsilon_r = 43.0$ $\rho = 1.00$ g/cm³

Cube 5x5x7: SAR (1g): 0.0249 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0119 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.27 dB



SAR Measurement Plot 8

M020404 - Intertek - Tilted Position Left- CH#59

Giant Electronics G4010

Generic Twin 2 Phantom; Left Hand Section; Position: (85°,65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

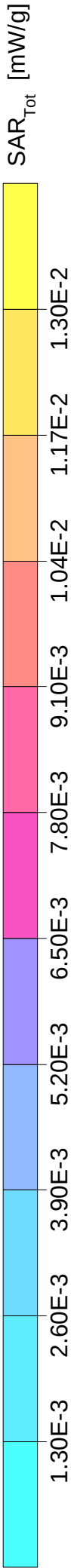
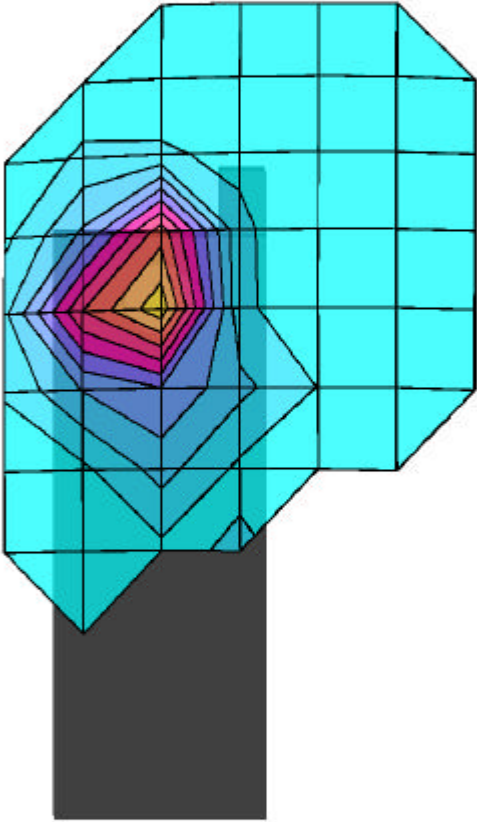
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.70 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0192 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0090 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.40 dB



SAR Measurement Plot 9

M020404 - Intertek - Tilted Position Right - CH#00

Giant Electronics G4010

Generic Twin 2 Phantom; Right Hand Section; Position: (85°, 65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

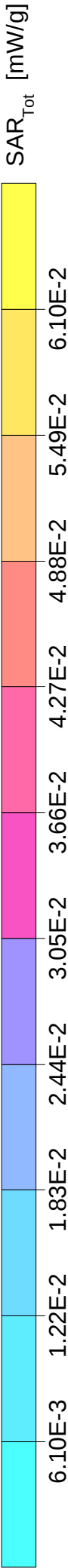
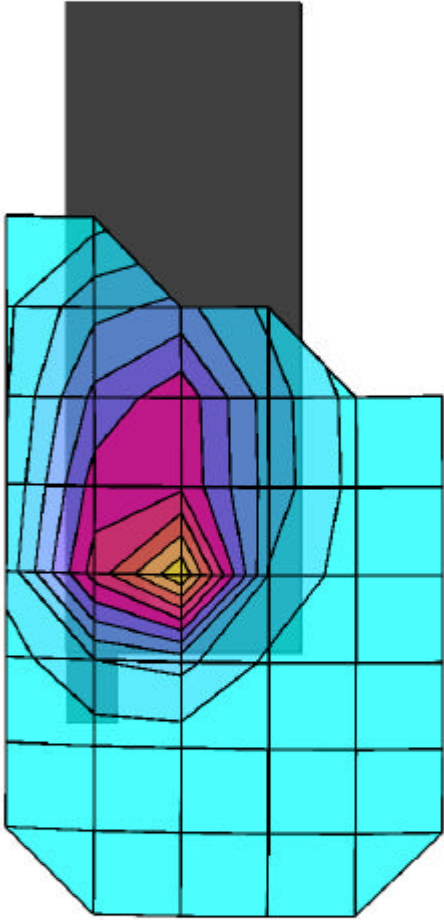
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.75 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0715 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0384 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.05 dB



SAR Measurement Plot 10

M020404 - Intertek - Tilted Position Right - CH#30

Giant Electronics G4010

Generic Twin 2 Phantom; Right Hand Section; Position: (85°, 65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

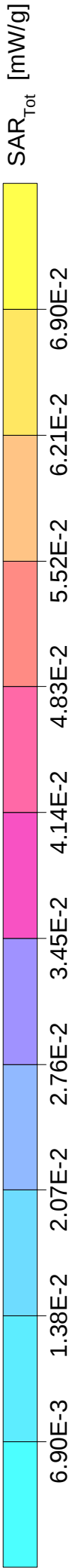
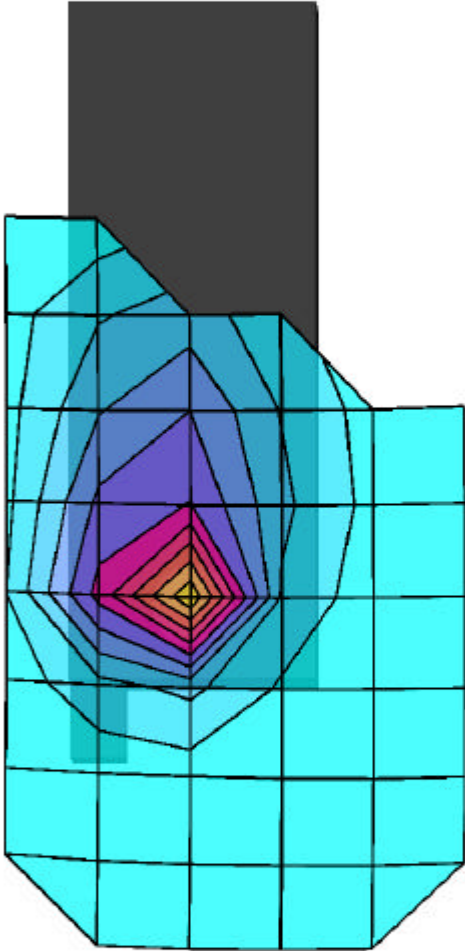
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.75 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0729 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0392 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.02 dB



SAR Measurement Plot 11

M020404 - Intertek - Tilted Position Right - CH#59

Giant Electronics G4010

Generic Twin 2 Phantom; Right Hand Section; Position: (85°, 65°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

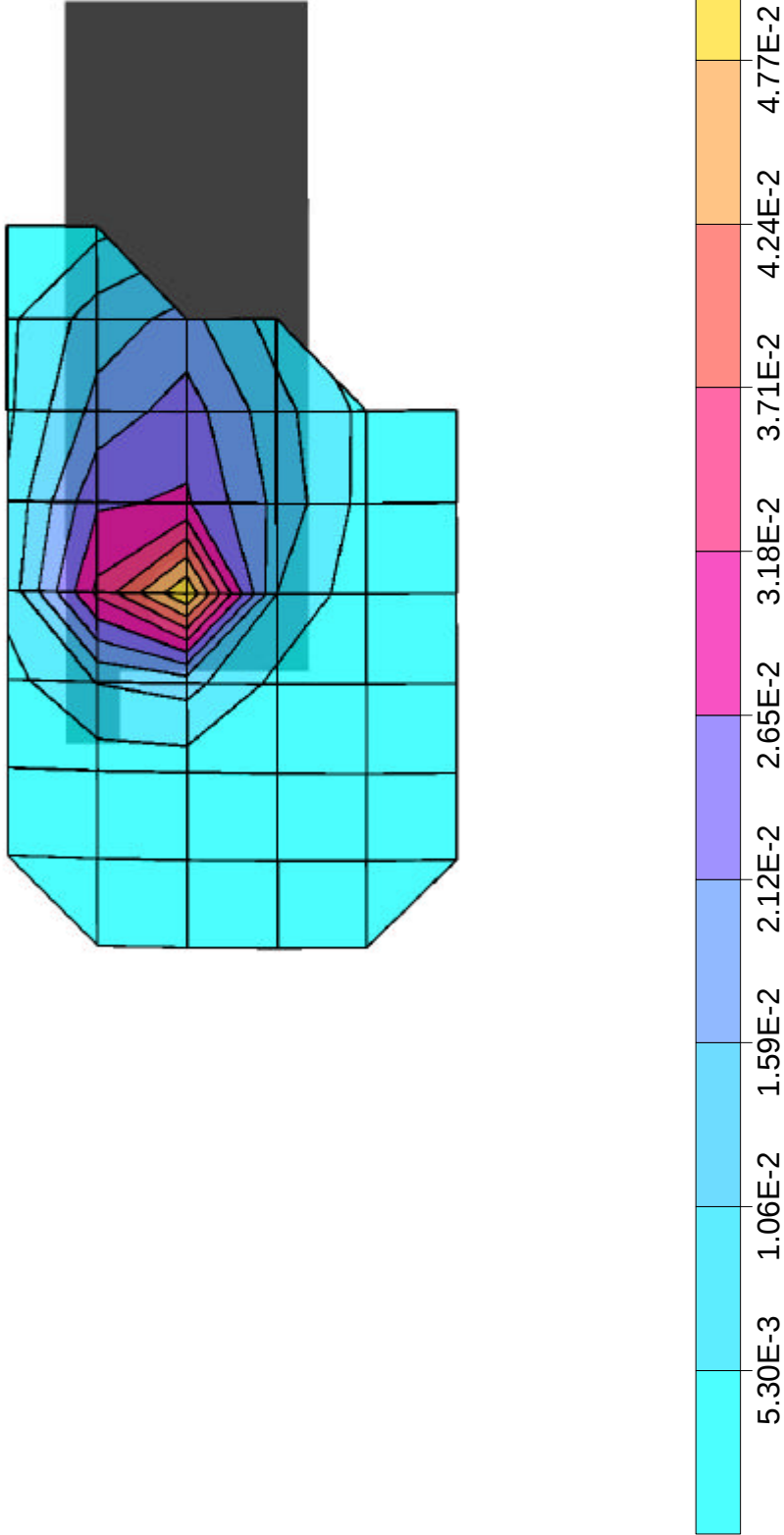
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.75 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.0605 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0322 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.04 dB



SAR Measurement Plot 12

M020404 - Intertek - Belt Clip Position - CH#00 #2

Giant Electronics G4010

Generic Twin 2 Phantom; Flat Section; Position: (90°,90°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

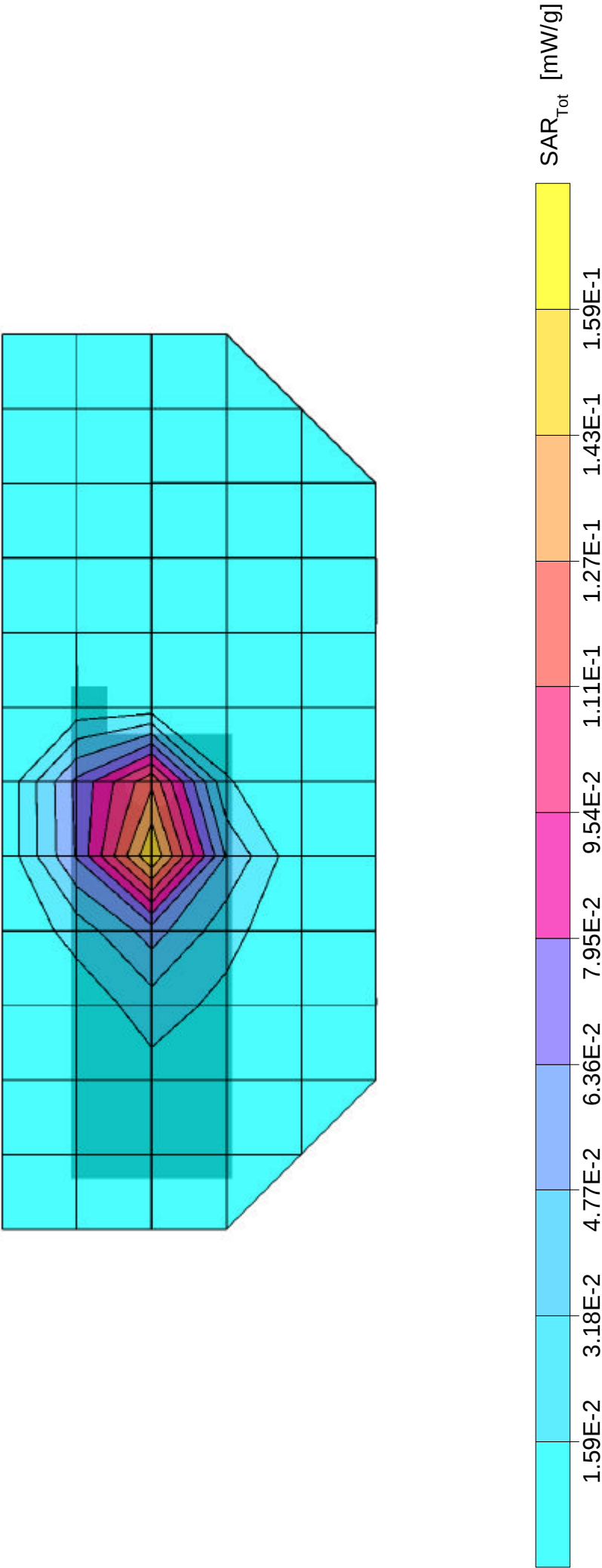
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.75$ mho/m $\epsilon_r = 43.0$ $\rho = 1.00$ g/cm³

Cube 5x5x7: SAR (1g): 0.171 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0933 mW/g, (Worst-case extrapolation)

Coarse: Dx = 25.0, Dy = 25.0, Dz = 15.0

Powerdrift: 0.03 dB



SAR Measurement Plot 13

M020404 - Intertek - Belt Clip Position - CH#30

Giant Electronics G4010

Generic Twin 2 Phantom; Flat Section; Position: (90°,90°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

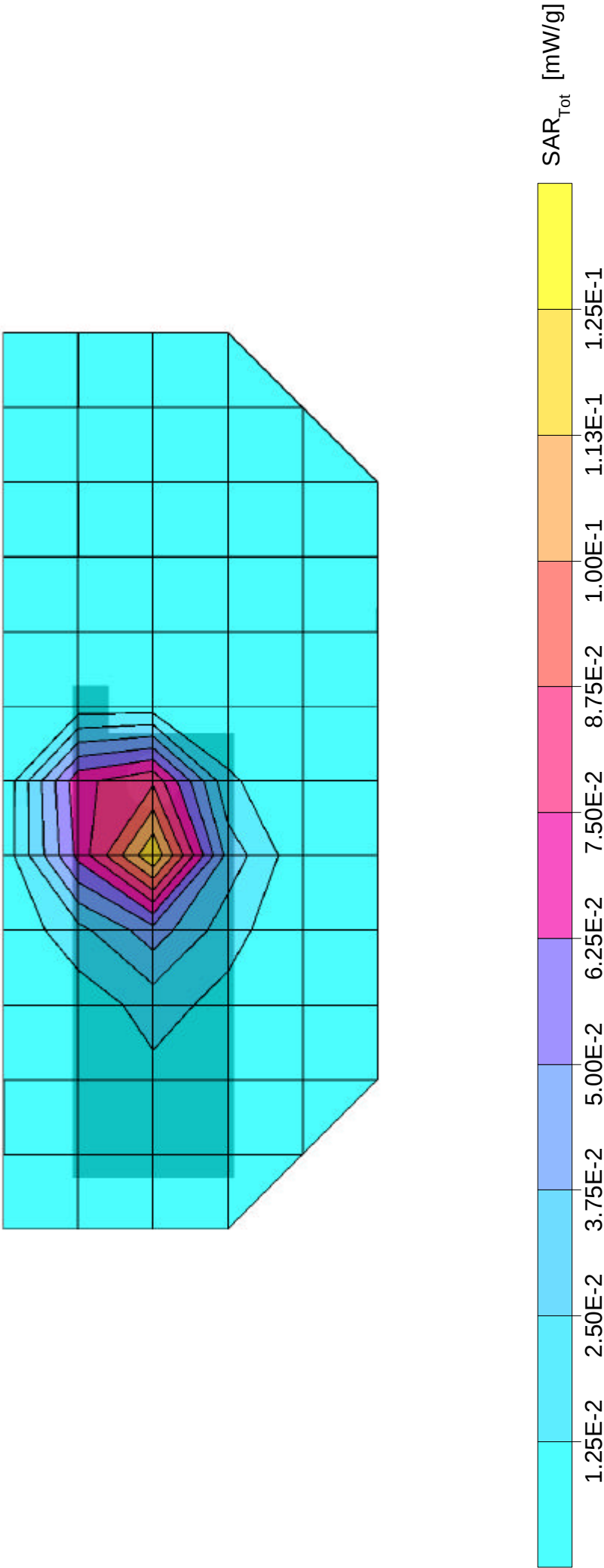
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.75 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.139 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0769 mW/g, (Worst-case extrapolation)

Coarse: Dx = 25.0, Dy = 25.0, Dz = 15.0

Powerdrift: -0.19 dB



SAR Measurement Plot 14

M020404 - Intertek - Belt Clip Position - CH#59

Giant Electronics G4010

Generic Twin 2 Phantom; Flat Section; Position: (90°,90°); Frequency: 2450 MHz

Probe: ET3DV6 - SN1377; ConvF(5.47,5.47,5.47)

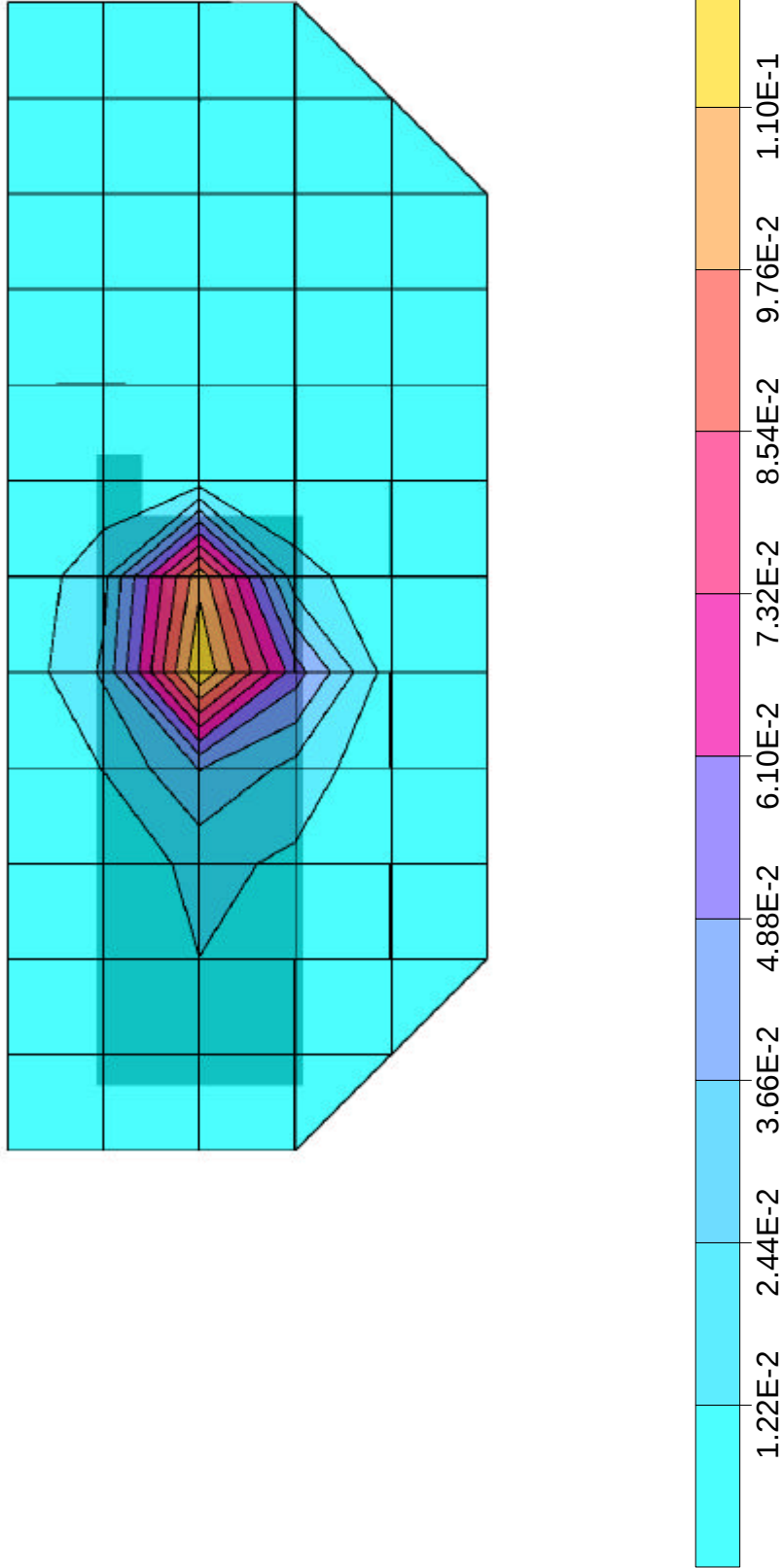
Crest factor: 8.0; Brain 2400 MHz: $\sigma = 1.75 \text{ mho/m}$, $\epsilon_r = 43.0$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.113 mW/g, (Worst-case extrapolation)

Cube 5x5x7: SAR (10g): 0.0623 mW/g, (Worst-case extrapolation)

Coarse: Dx = 25.0, Dy = 25.0, Dz = 15.0

Powerdrift: -0.24 dB



SAR Measurement Plot 15