

APPENDIX 1

SAR Measurement Data

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EXHIBIT 1. PRESCAN MEASUREMENT SUMMARY

Battery	Antenna	Power (dBm)	CH	CH. Freq	HEAD SAR1g (W/Kg)	HEAD SAR10g (W/Kg)
				(MHz)		
BP-283	FA-S82U 430-480 MHz	37.32	16	450	5.55	4.17
BP-284		37.32	16	450	5.58	4.18

Belt Clip	Antenna	Power (dBm)	CH	CH. Freq	BODY SAR1g (W/Kg)	BODY SAR10g (W/Kg)
				(MHz)	BP-284	BP-284
					3210mAh	3210mAh
MB-133	FA-S82U 430-480 MHz	37.32	14	450	7.93	5.69
MB-136		37.32	14	450	4.86	3.64
MB-96N		37.32	14	450	3.91	2.95

Microphone	Antenna	Power (dBm)	CH	CH. Freq	BODY SAR1g (W/Kg)	BODY SAR10g (W/Kg)
				(MHz)	BP-284	BP-284
					3210mAh	3210mAh
HS-94	FA-S82U 430-480 MHz	37.32	14	450	5.12	3.75
HM-222		37.32	14	450	5.27	3.85

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82U 450MHz BP-283.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450$ MHz; $\sigma = 0.828$ S/m; $\epsilon_r = 43.863$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 6.18 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

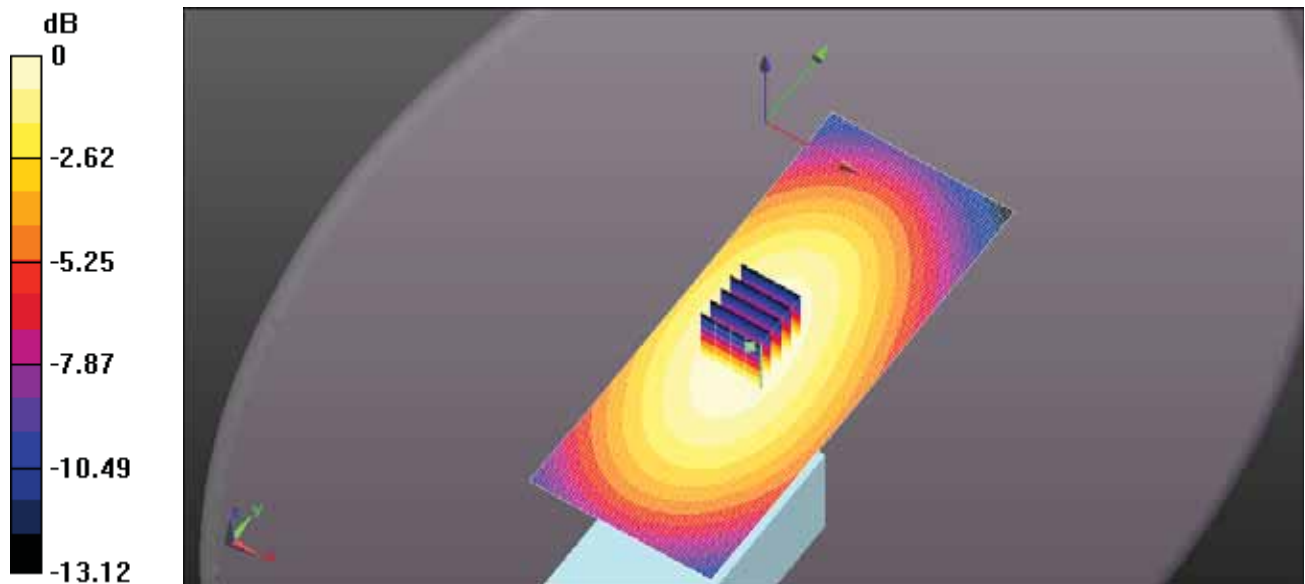
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 23.03 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 6.88 W/kg

SAR(1 g) = 5.55 W/kg; SAR(10 g) = 4.17 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.90 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82U 450MHz BP-284.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.828 \text{ S/m}$; $\epsilon_r = 43.863$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 5.94 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

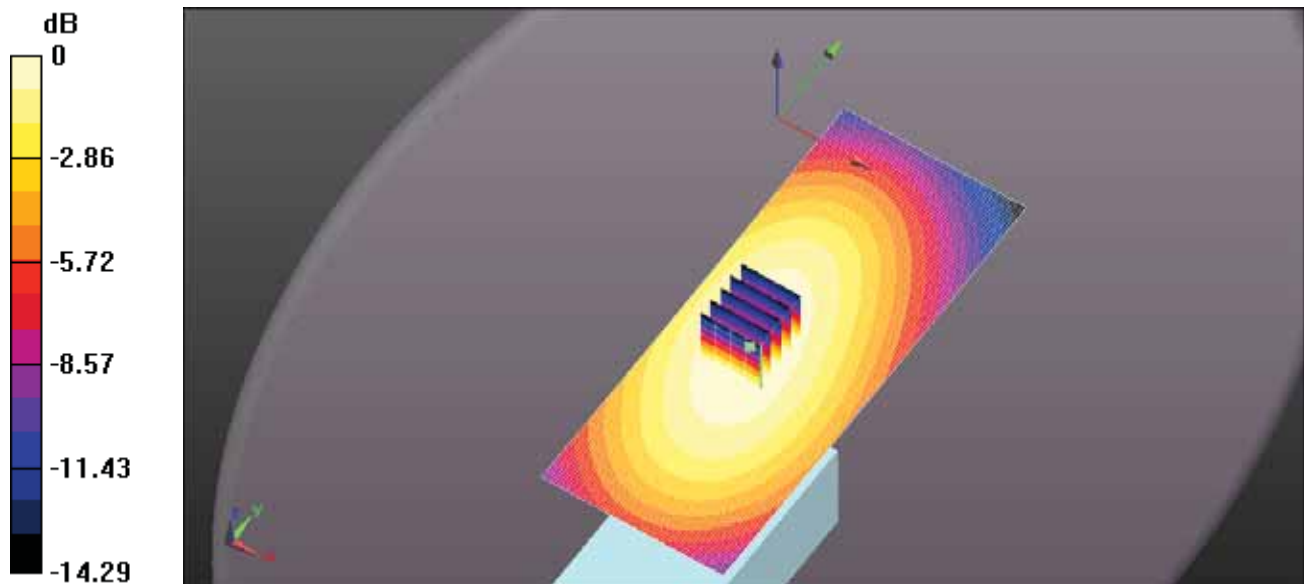
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.20 V/m ; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 6.94 W/kg

SAR(1 g) = 5.58 W/kg ; SAR(10 g) = 4.18 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.93 W/kg



0 dB = 5.94 W/kg = 7.74 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q MB-133 FA-S82U 450MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450$ MHz; $\sigma = 0.902$ S/m; $\epsilon_r = 57.353$; $\rho = 1000$ kg/m³; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 10.5 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

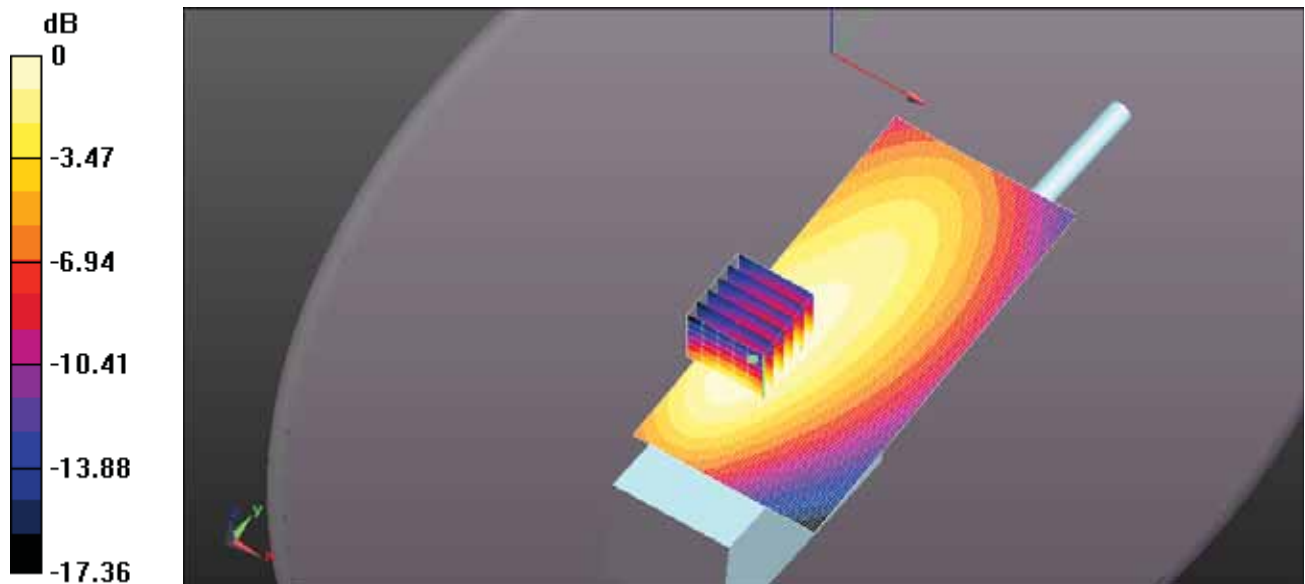
(6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 81.90 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 10.3 W/kg

SAR(1 g) = 7.93 W/kg; SAR(10 g) = 5.69 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 8.55 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q MB-136 FA-S82U 450MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 57.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.15 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

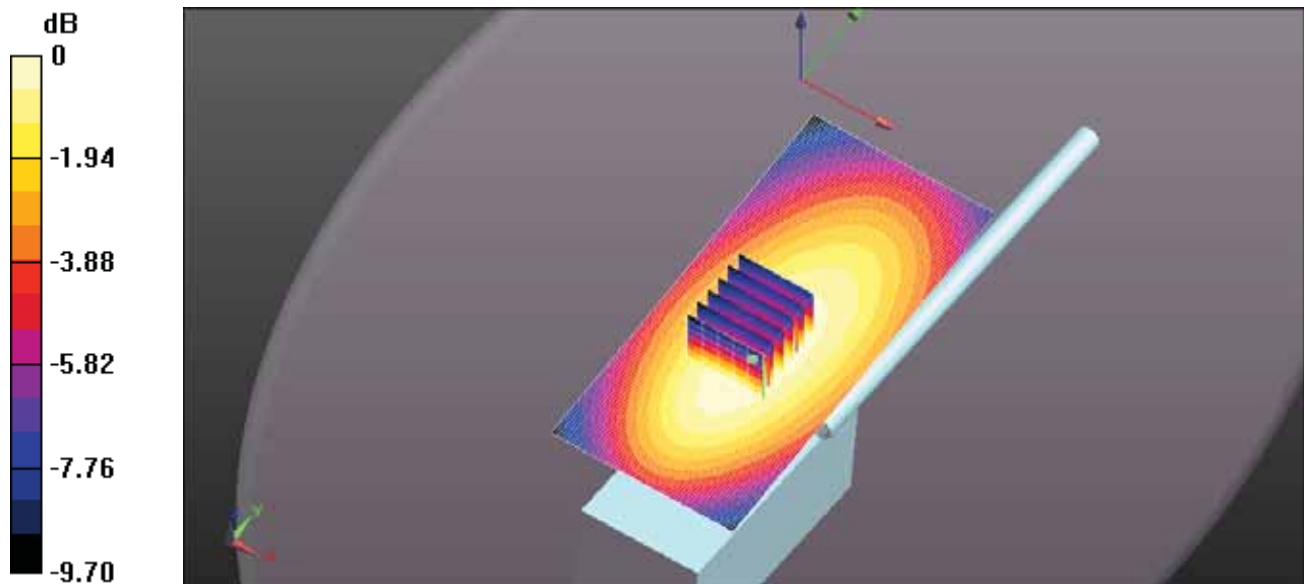
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 68.96 V/m ; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 6.02 W/kg

SAR(1 g) = 4.86 W/kg ; SAR(10 g) = 3.64 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.16 W/kg



0 dB = 6.15 W/kg = 7.89 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q MB-96N FA-S82U 450MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 57.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.98 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

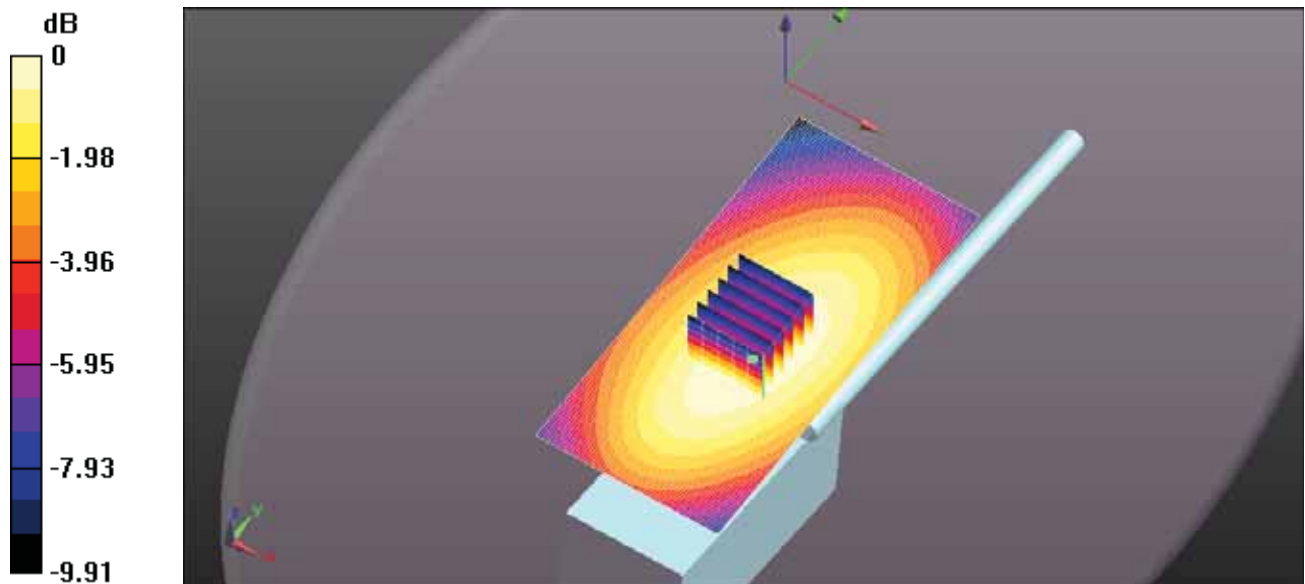
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 65.92 V/m ; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 4.83 W/kg

SAR(1 g) = 3.91 W/kg ; SAR(10 g) = 2.95 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.14 W/kg



0 dB = 4.98 W/kg = 6.97 dBW/kg

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Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q MB-133 HS-94 FA-S82U 450MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 57.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.65 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

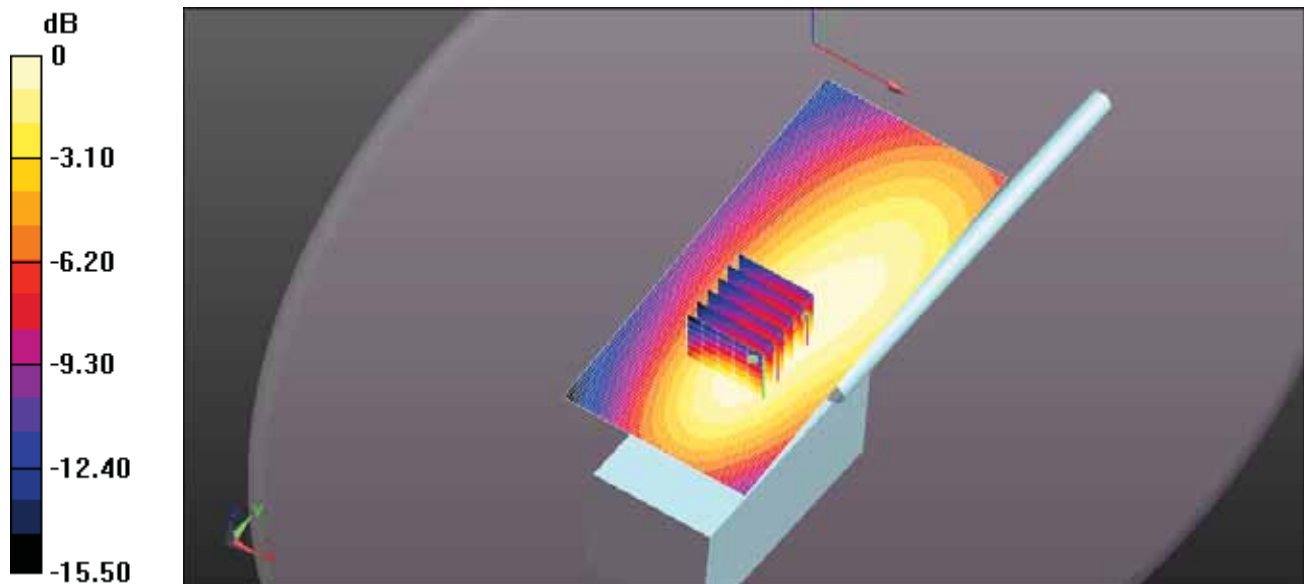
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 79.33 V/m ; Power Drift = -0.20 dB

Peak SAR (extrapolated) = 6.43 W/kg

SAR(1 g) = 5.12 W/kg ; SAR(10 g) = 3.75 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.45 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q MB-133 HM-222 FA-S82U 450MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 57.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.83 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

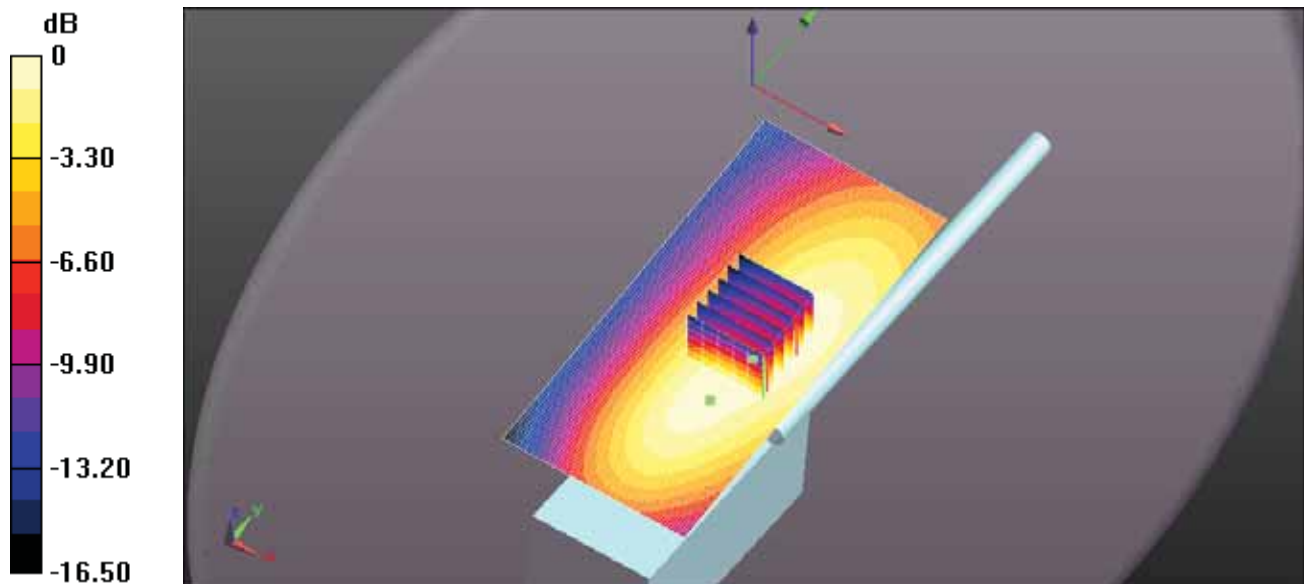
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 83.06 V/m ; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 6.72 W/kg

SAR(1 g) = 5.27 W/kg ; SAR(10 g) = 3.85 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.64 W/kg



0 dB = 6.83 W/kg = 8.34 dBW/kg

EXHIBIT 2. HEAD SAR MEASUREMENTS

Antenna	Power (dBm)	CH	CH. Freq	HEAD SAR1g (W/Kg)	HEAD SAR10g (W/Kg)
				BP-284	BP-284
			(MHz)	3210mAh	3210mAh
FA-S81U 380-430 MHz	32.27	1	380	4.91	3.74
	37.21	2	392.5	3.56	2.71
	37.23	5	405	2.05	1.56
	37.15	8	417.5	2.57	1.97
	37.09	11	430	2.1	1.6
FA-S82U 430-480 MHz	37.09	11	430	5.95	4.54
	37.32	14	450	5.58	4.18
	37.17	17	470	3.27	2.48
FA-S83U 470-520 MHz	37.17	17	470	4.39	2.98
FA-S81US 400-450 MHz	37.23	4	400	4.03	2.9
	37.20	7	412.5	4.28	3.25
	37.07	10	425	3.64	2.75
	37.14	12	437.5	2.42	1.83
	37.32	14	450	1.53	1.15
FA-S82US 450-490 MHz	37.32	14	450	2.65	1.98
	37.42	16	460	2.81	2.1
	37.17	17	470	4.4	3.29

Cut Antenna	Power (dBm)	CH	CH. Freq (MHz)	HEAD SAR1g (W/Kg)	HEAD SAR10g (W/Kg)
				BP-284	BP-284
				3210mAh	3210mAh
FA-S76UC 360-520 MHz 175mm 380MHz	32.27	1	380	5.41	3.56
	37.23	3	395		
	37.26	6	410	4.3	3.29
	37.07	10	425		
	37.17	13	440	2.89	2.19
	37.43	15	455		
	37.17	17	470	2.01	1.51
FA-S76UC 360-520 MHz 165mm 400MHz	32.27	1	380		
	37.23	4	400	5.99	4.58
	37.26	6	410		
	37.07	10	425	4.46	3.38
	37.17	13	440		
	37.43	15	455	3.13	2.36
	37.17	17	470		
FA-S76UC 360-520 MHz 156mm 420MHz	32.27	1	380		
	37.23	3	395	5.92	4.41
	37.26	6	410		
	37.13	9	420	5.61	4.28
	37.17	13	440		
	37.43	15	455	4.13	3.12
	37.17	17	470		
FA-S76UC 360-520 MHz 148mm 440MHz	32.27	1	380	2.2	1.69
	37.23	3	395		
	37.26	6	410	5.56	4.26
	37.07	10	425		
	37.17	13	440	5.59	4.25
	37.43	15	455		
	37.17	17	470	4.09	3.09
FA-S76UC 360-520 MHz 142mm 460MHz	32.27	1	380		
	37.23	3	395	5.52	4.25
	37.26	6	410		
	37.07	10	425	5.6	4.26
	37.17	13	440		
	37.42	16	460	4.65	3.51
	37.17	17	470		

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 380MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transciever ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 380 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 380 \text{ MHz}$; $\sigma = 0.713 \text{ S/m}$; $\epsilon_r = 44.66$; $\rho = 1000 \text{ kg/m}^3$; Phantom section:
Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 5.48 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

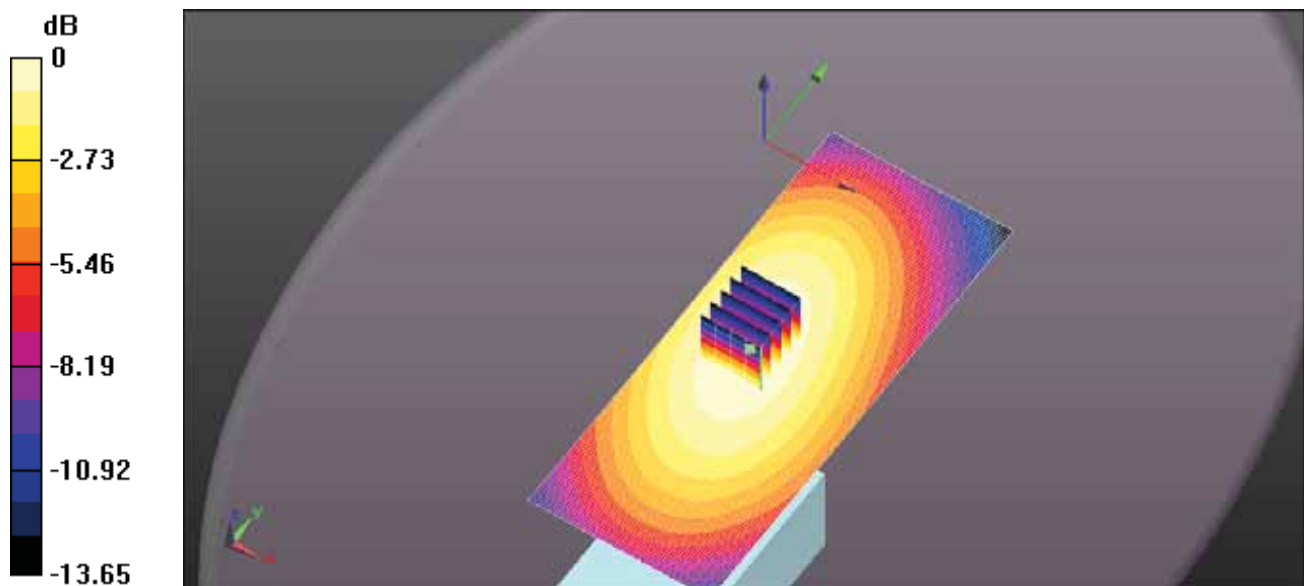
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.50 V/m ; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 6.28 W/kg

SAR(1 g) = 4.91 W/kg ; SAR(10 g) = 3.74 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.41 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 392.5MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 392.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 392.5$ MHz; $\sigma = 0.72$ S/m; $\epsilon_r = 44.044$; $\rho = 1000$ kg/m³ ;
Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.96 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

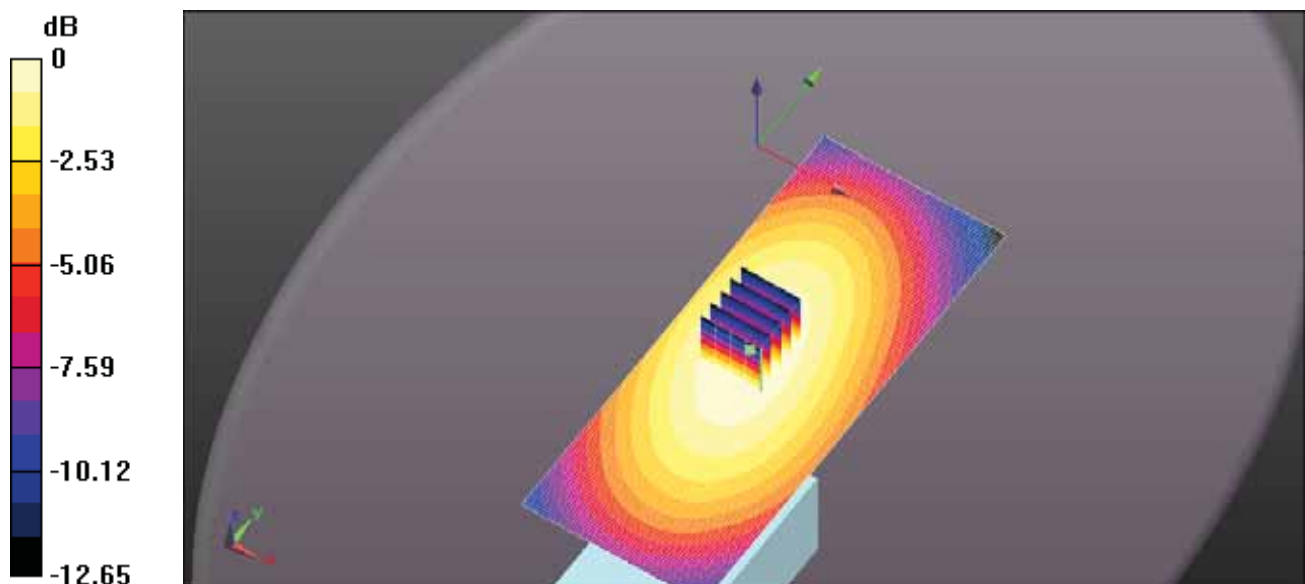
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 23.76 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 4.54 W/kg

SAR(1 g) = 3.56 W/kg; SAR(10 g) = 2.71 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.93 W/kg



0 dB = 3.96 W/kg = 5.98 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 405MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 405 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 405 \text{ MHz}$; $\sigma = 0.742 \text{ S/m}$; $\epsilon_r = 43.586$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.27 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

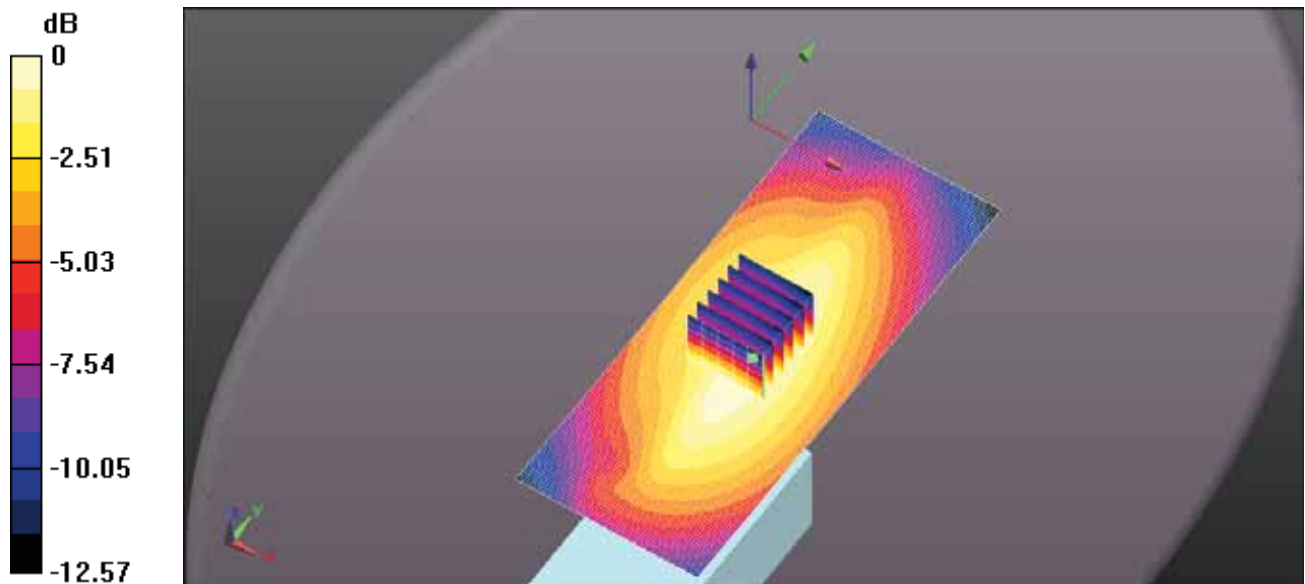
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.78 V/m ; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 2.62 W/kg

SAR(1 g) = 2.05 W/kg ; SAR(10 g) = 1.56 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.24 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 417.5MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 417.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 417.5$ MHz; $\sigma = 0.77$ S/m; $\epsilon_r = 43.371$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.91 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

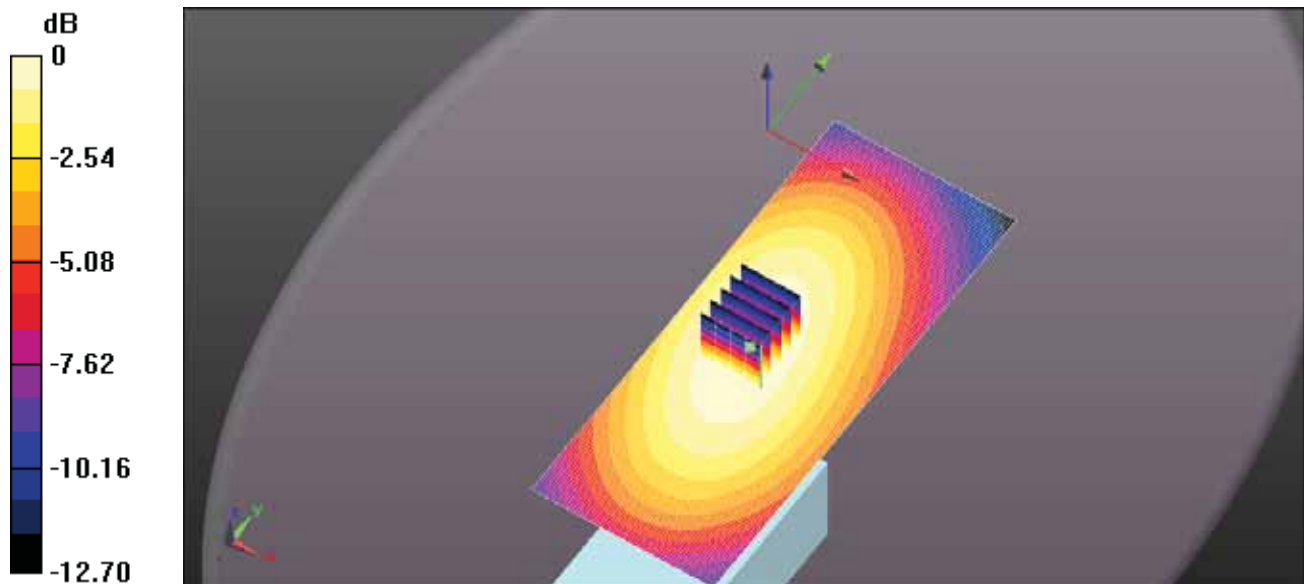
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 19.47 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 3.28 W/kg

SAR(1 g) = 2.57 W/kg; SAR(10 g) = 1.97 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.83 W/kg



0 dB = 2.91 W/kg = 4.64 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 430MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 430 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 430 \text{ MHz}$; $\sigma = 0.801 \text{ S/m}$; $\epsilon_r = 43.354$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 2.34 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

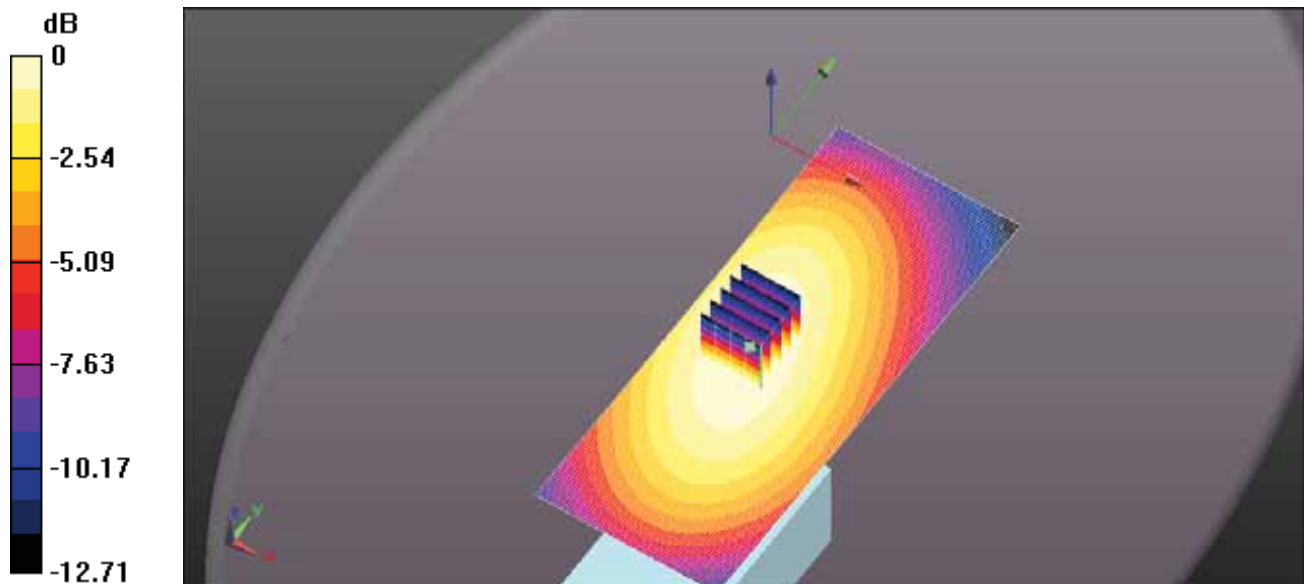
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.51 V/m ; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 2.66 W/kg

SAR(1 g) = 2.1 W/kg ; SAR(10 g) = 1.6 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.32 W/kg



0 dB = 2.34 W/kg = 3.70 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82U 430MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 430 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 430 \text{ MHz}$; $\sigma = 0.801 \text{ S/m}$; $\epsilon_r = 43.354$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.77 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

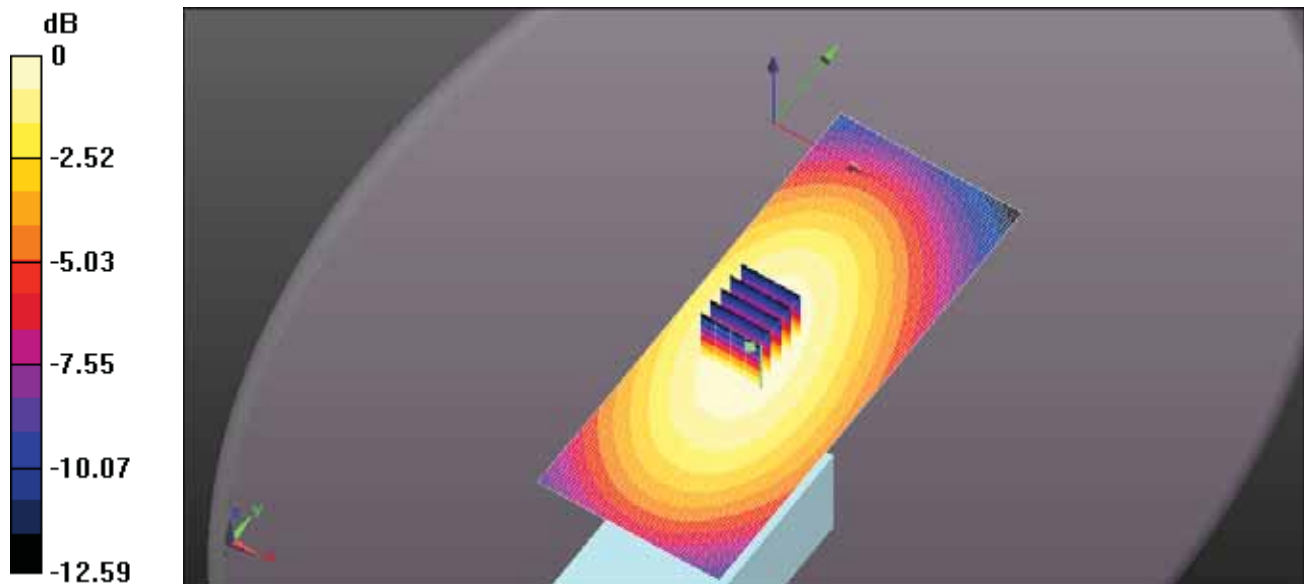
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.79 V/m ; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 7.51 W/kg

SAR(1 g) = 5.95 W/kg ; SAR(10 g) = 4.54 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.56 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82U 450MHz BP-284.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.828 \text{ S/m}$; $\epsilon_r = 43.863$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 5.94 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

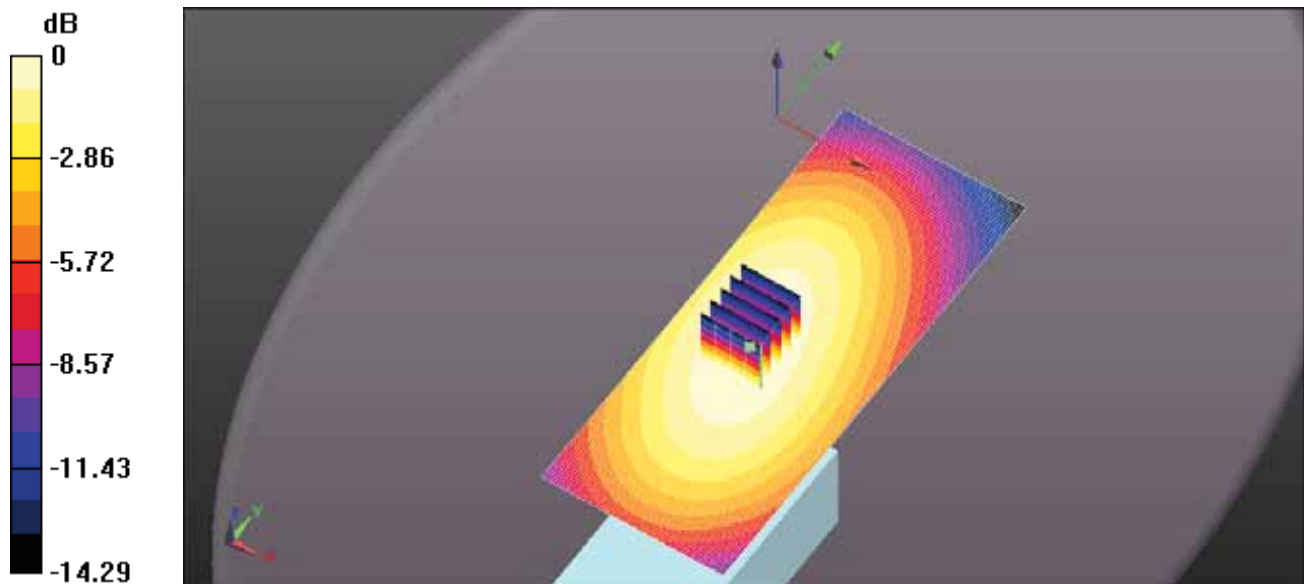
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.20 V/m ; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 6.94 W/kg

SAR(1 g) = 5.58 W/kg ; SAR(10 g) = 4.18 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.93 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82U 470MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transciever ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 43.826$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.68 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

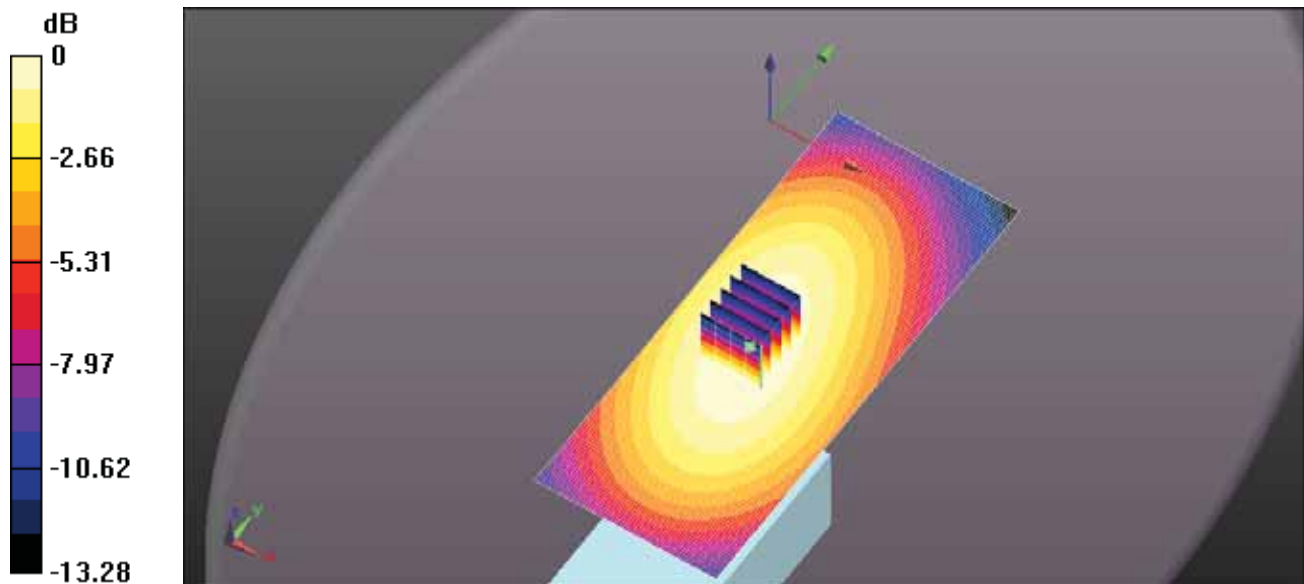
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.96 V/m ; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 4.16 W/kg

SAR(1 g) = 3.27 W/kg ; SAR(10 g) = 2.48 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.61 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S83U 470MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transciever ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 43.826$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 5.99 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

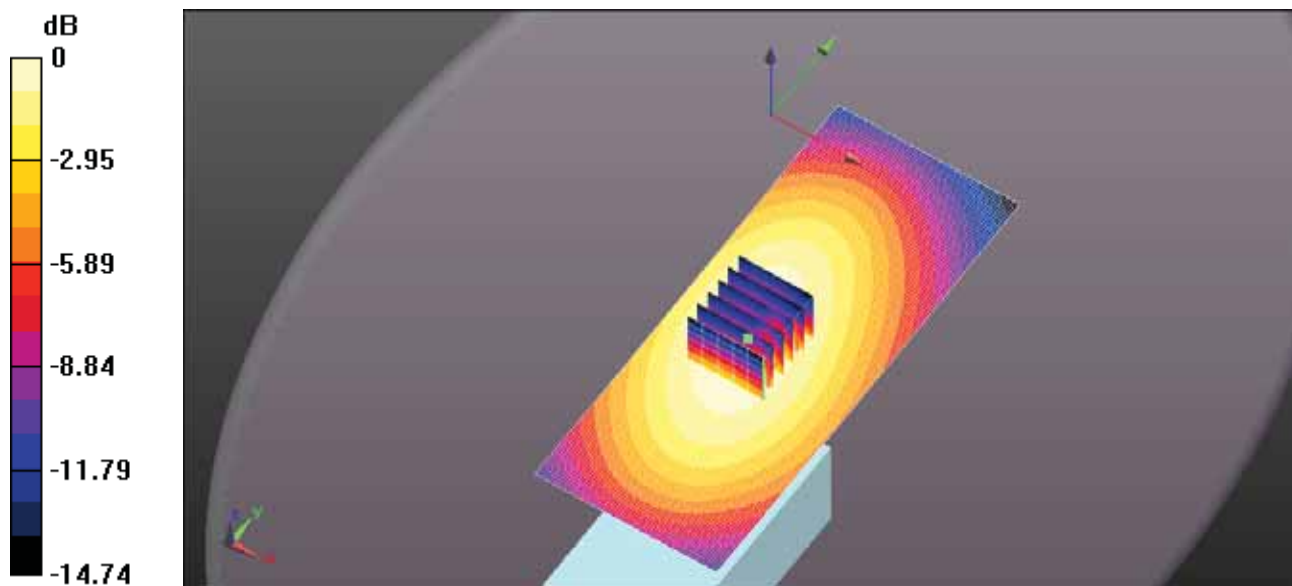
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.83 V/m ; Power Drift = -1.97 dB

Peak SAR (extrapolated) = 6.08 W/kg

SAR(1 g) = 4.39 W/kg ; SAR(10 g) = 2.98 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.25 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 400MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 400 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 400 \text{ MHz}$; $\sigma = 0.731 \text{ S/m}$; $\epsilon_r = 43.753$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.68 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

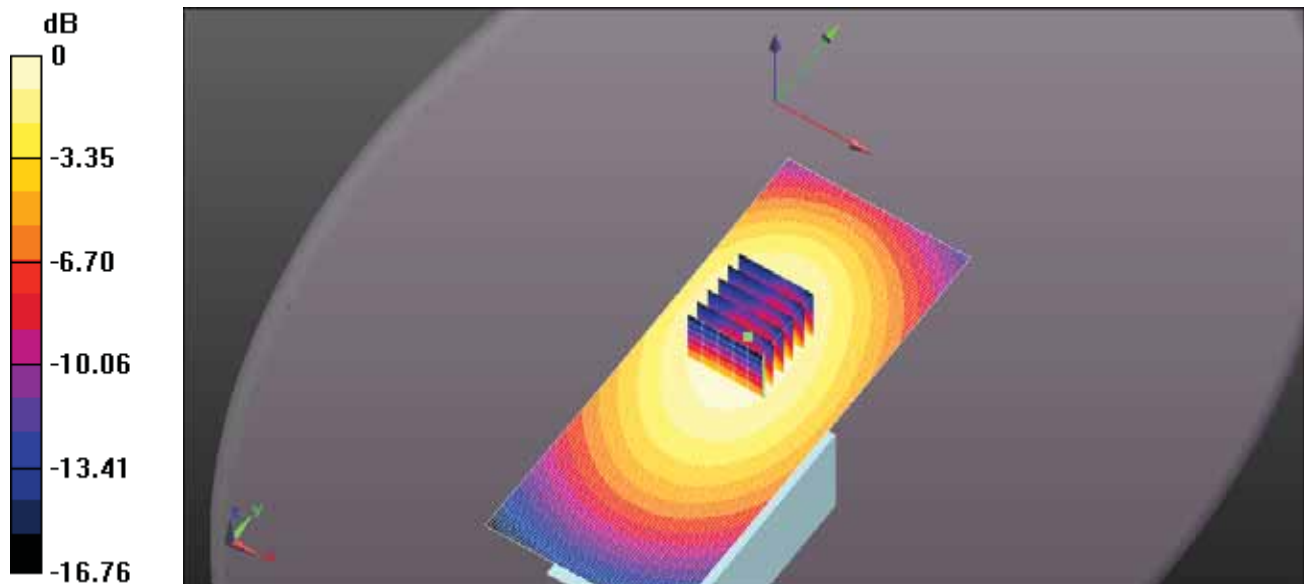
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 75.00 V/m ; Power Drift = -1.35 dB

Peak SAR (extrapolated) = 5.29 W/kg

SAR(1 g) = 4.03 W/kg ; SAR(10 g) = 2.9 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.45 W/kg



0 dB = 4.68 W/kg = 6.71 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 412.5 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 412.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 412.5$ MHz; $\sigma = 0.758$ S/m; $\epsilon_r = 43.46$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 4.83 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

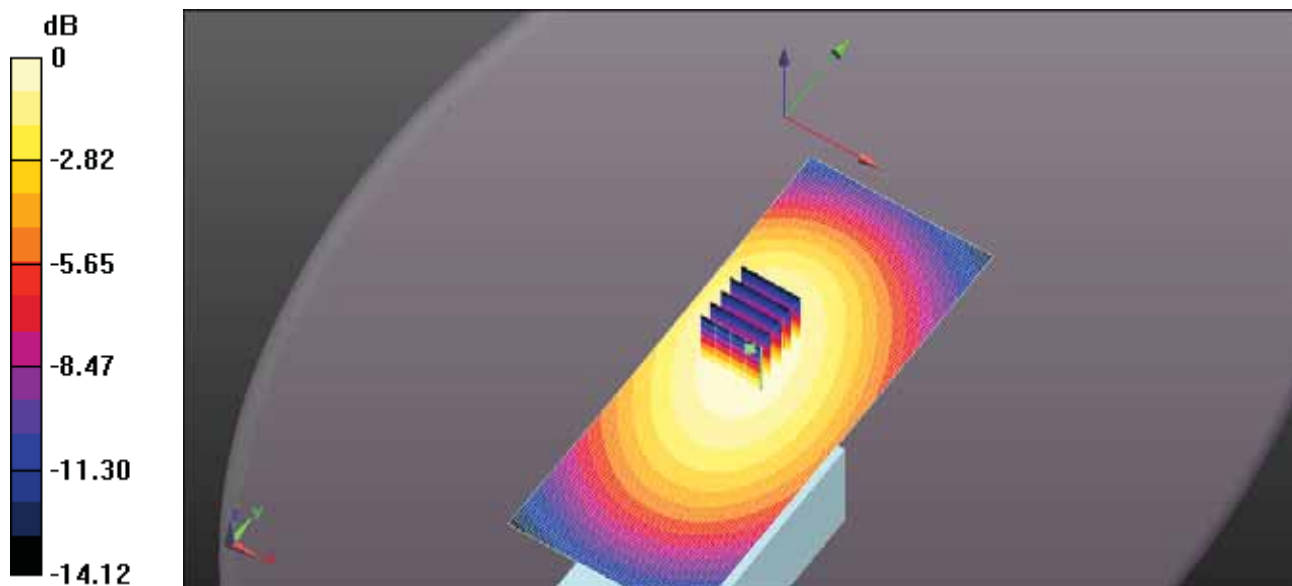
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 74.04 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 5.42 W/kg

SAR(1 g) = 4.28 W/kg; SAR(10 g) = 3.25 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.72 W/kg



0 dB = 4.83 W/kg = 6.84 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 425 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 425 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 425 \text{ MHz}$; $\sigma = 0.789 \text{ S/m}$; $\epsilon_r = 43.355$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.08 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

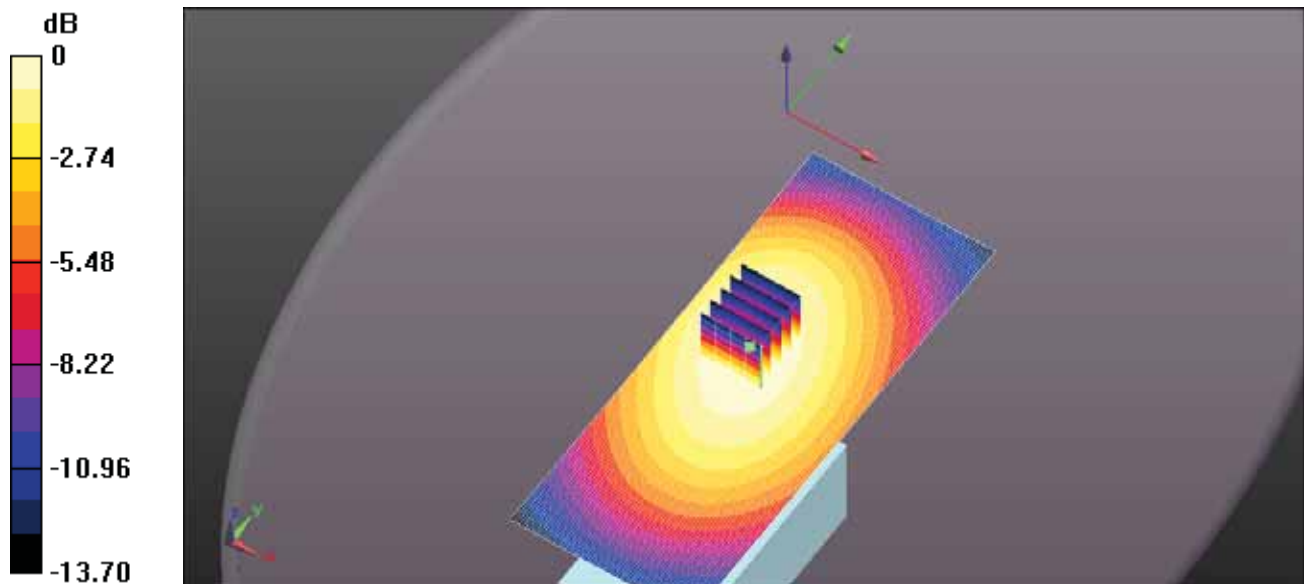
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 66.94 V/m ; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 4.60 W/kg

SAR(1 g) = 3.64 W/kg ; SAR(10 g) = 2.75 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.03 W/kg



0 dB = 4.08 W/kg = 6.11 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 437.5 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 437.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 437.5$ MHz; $\sigma = 0.812$ S/m; $\epsilon_r = 43.537$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.68 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

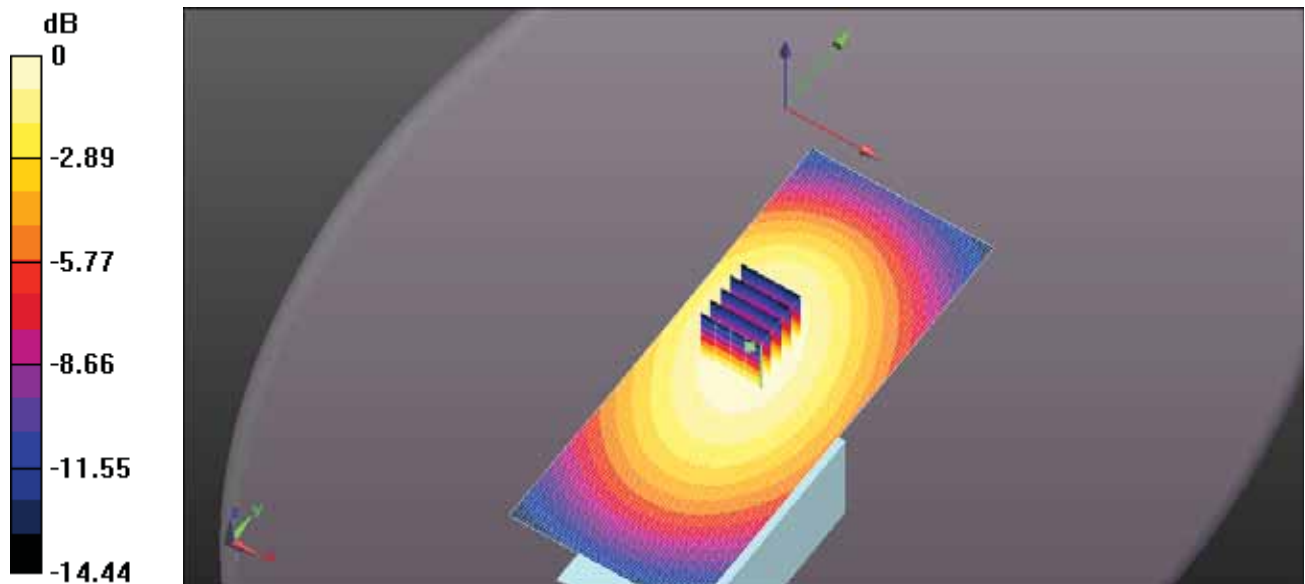
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 54.20 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 3.06 W/kg

SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.83 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.67 W/kg



0 dB = 2.68 W/kg = 4.28 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 450 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450$ MHz; $\sigma = 0.828$ S/m; $\epsilon_r = 43.863$; $\rho = 1000$ kg/m³; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.65 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

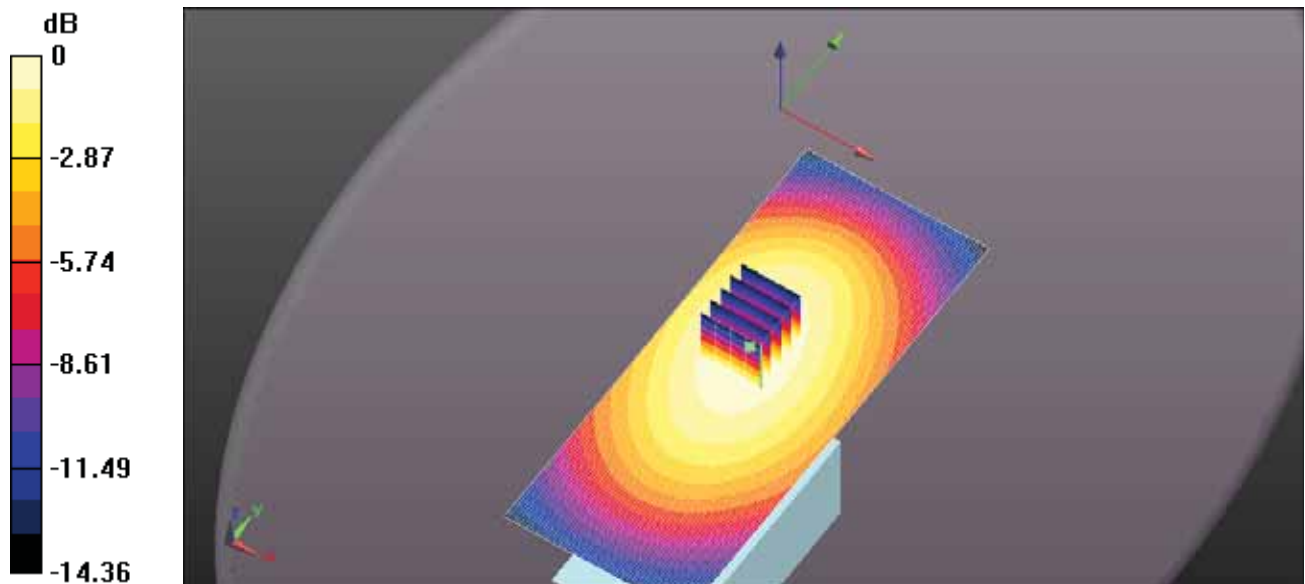
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 42.32 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 1.53 W/kg; SAR(10 g) = 1.15 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.63 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82US 450 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450$ MHz; $\sigma = 0.828$ S/m; $\epsilon_r = 43.863$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 4.05 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

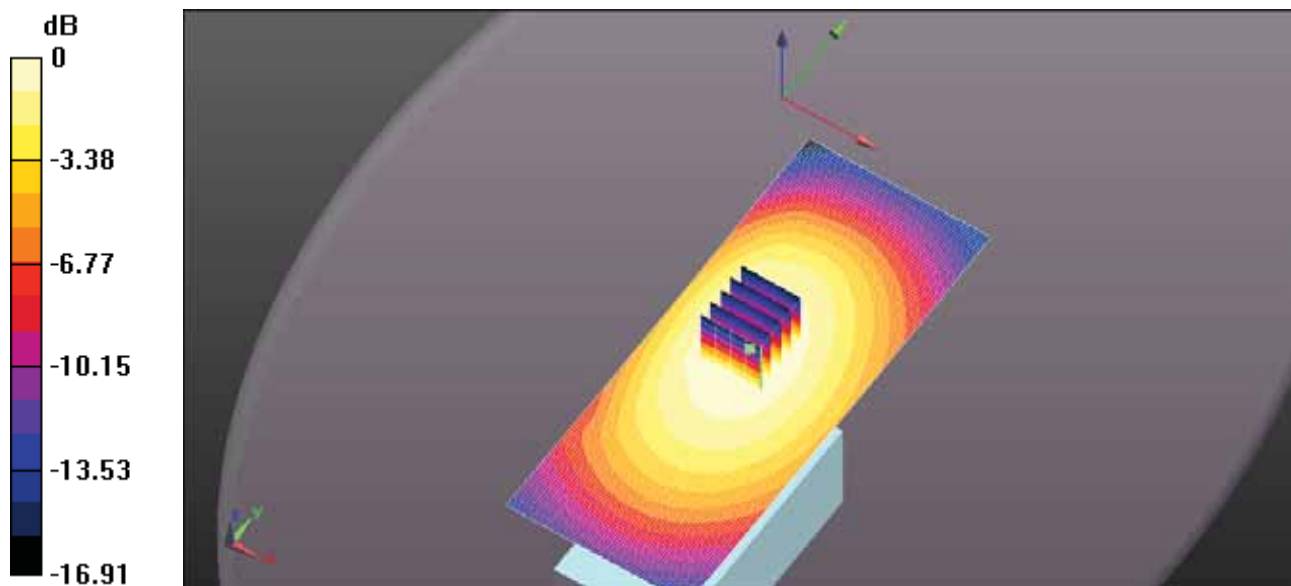
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 56.32 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 3.26 W/kg

SAR(1 g) = 2.65 W/kg; SAR(10 g) = 1.98 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.82 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82US 460 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 460 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 460$ MHz; $\sigma = 0.833$ S/m; $\epsilon_r = 43.935$; $\rho = 1000$ kg/m³; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 4.78 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

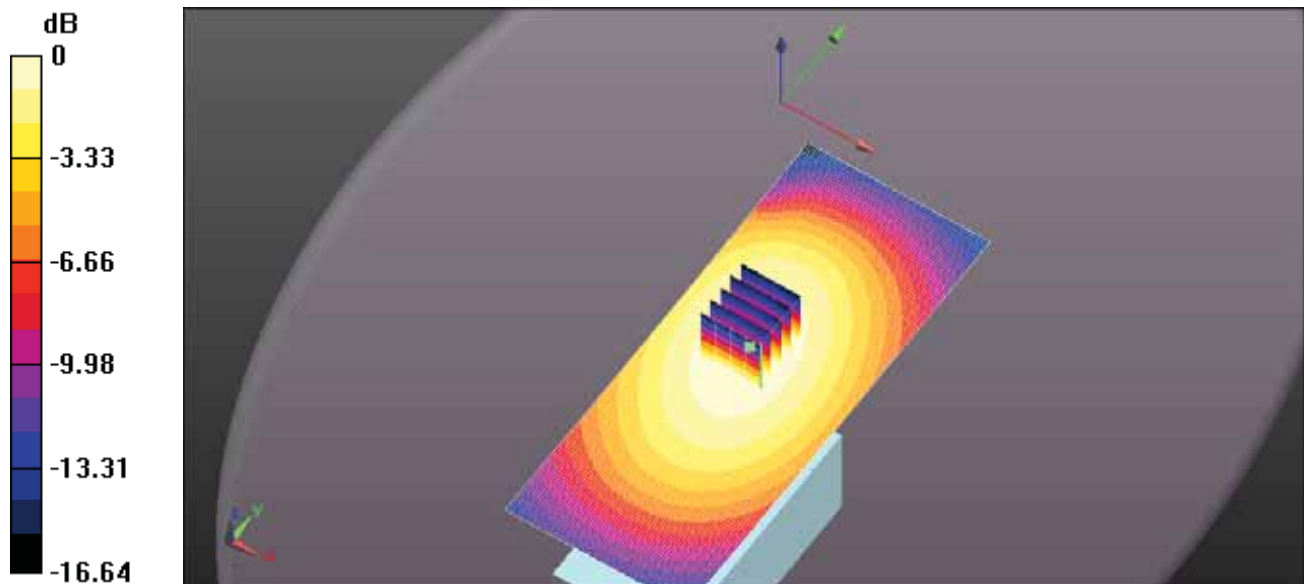
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 58.19 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.59 W/kg

SAR(1 g) = 2.81 W/kg; SAR(10 g) = 2.1 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.11 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82US 470 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 43.826$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 5.10 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

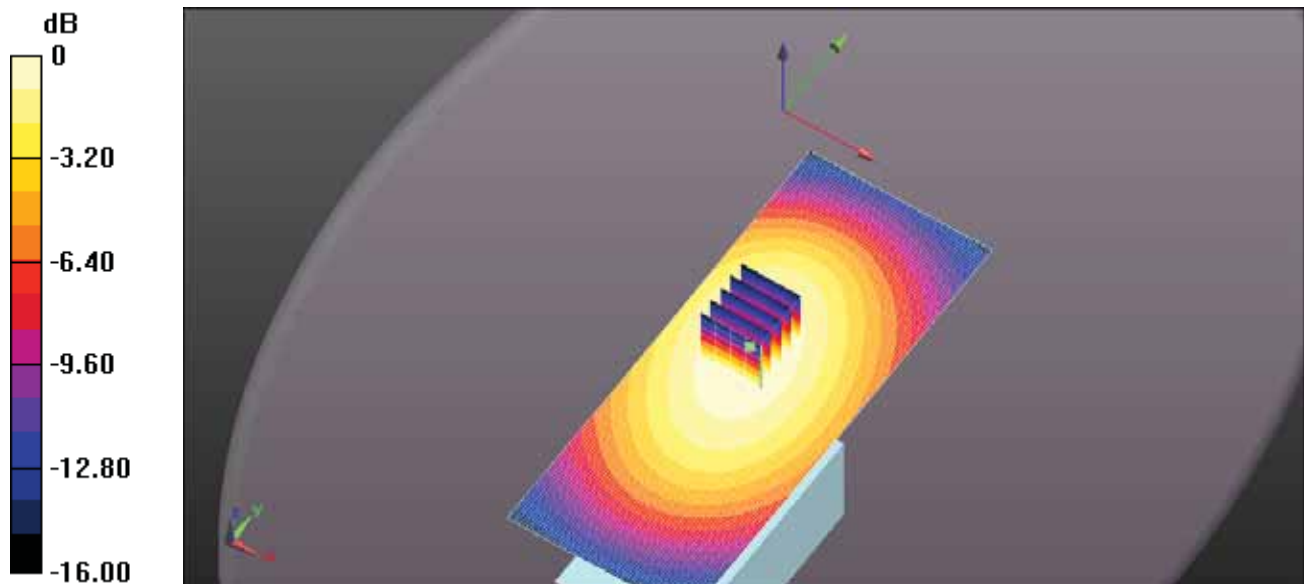
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 73.17 V/m ; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 5.66 W/kg

SAR(1 g) = 4.4 W/kg ; SAR(10 g) = 3.29 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.87 W/kg



0 dB = 5.10 W/kg = 7.08 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 175mm 380 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 380 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 380 \text{ MHz}$; $\sigma = 0.713 \text{ S/m}$; $\epsilon_r = 44.66$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.76 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

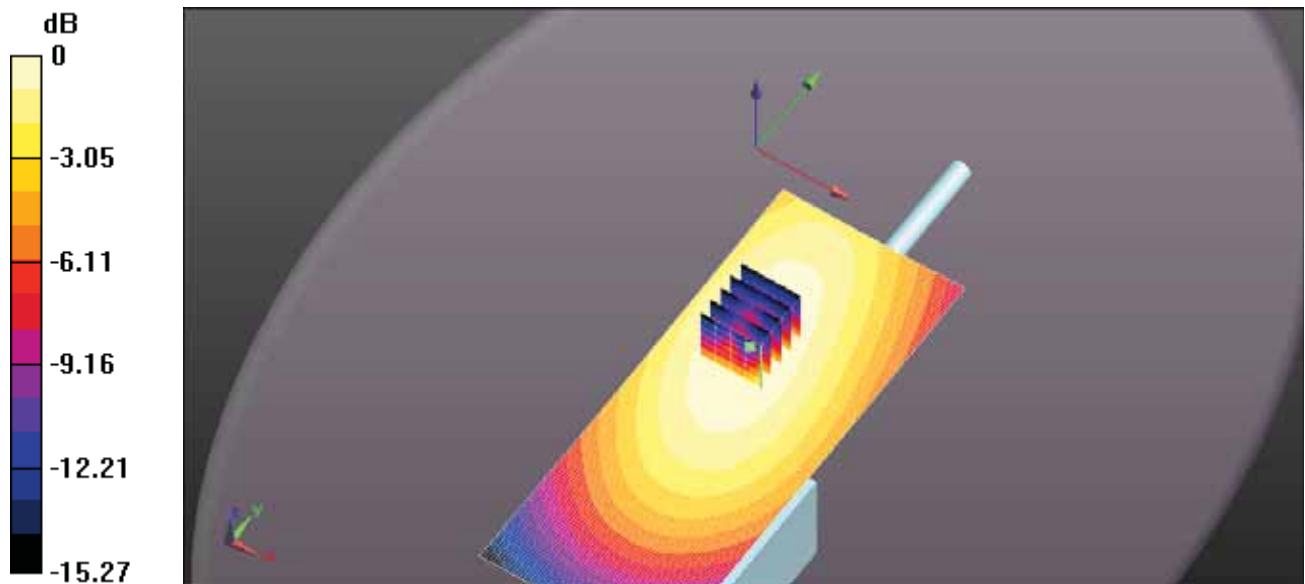
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 90.23 V/m ; Power Drift = -1.70 dB

Peak SAR (extrapolated) = 7.57 W/kg

SAR(1 g) = 5.41 W/kg ; SAR(10 g) = 3.56 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.57 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 175mm 410 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transciever ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 410 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 410 \text{ MHz}$; $\sigma = 0.753 \text{ S/m}$; $\epsilon_r = 43.529$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.72 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

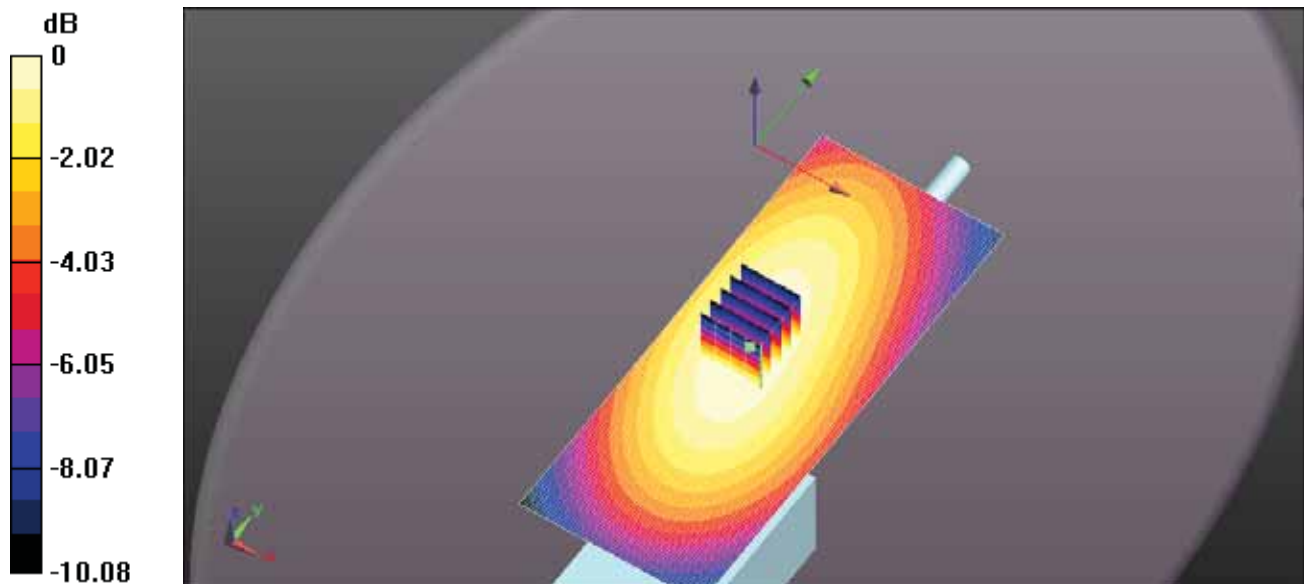
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 75.32 V/m ; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 5.45 W/kg

SAR(1 g) = 4.3 W/kg ; SAR(10 g) = 3.29 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.73 W/kg



0 dB = 4.72 W/kg = 6.74 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 175mm 440 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 440 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 440$ MHz; $\sigma = 0.815$ S/m; $\epsilon_r = 43.588$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.18 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

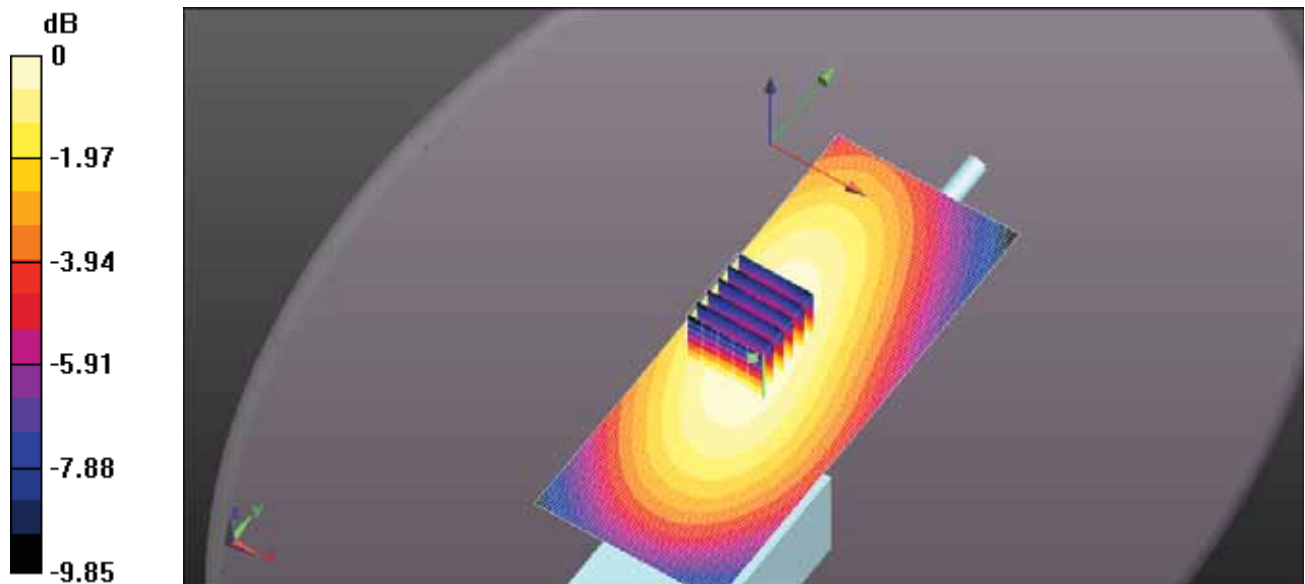
(6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 58.79 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 3.68 W/kg

SAR(1 g) = 2.89 W/kg; SAR(10 g) = 2.19 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.19 W/kg



0 dB = 3.18 W/kg = 5.03 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 175mm 470 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470$ MHz; $\sigma = 0.83$ S/m; $\epsilon_r = 43.826$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.25 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

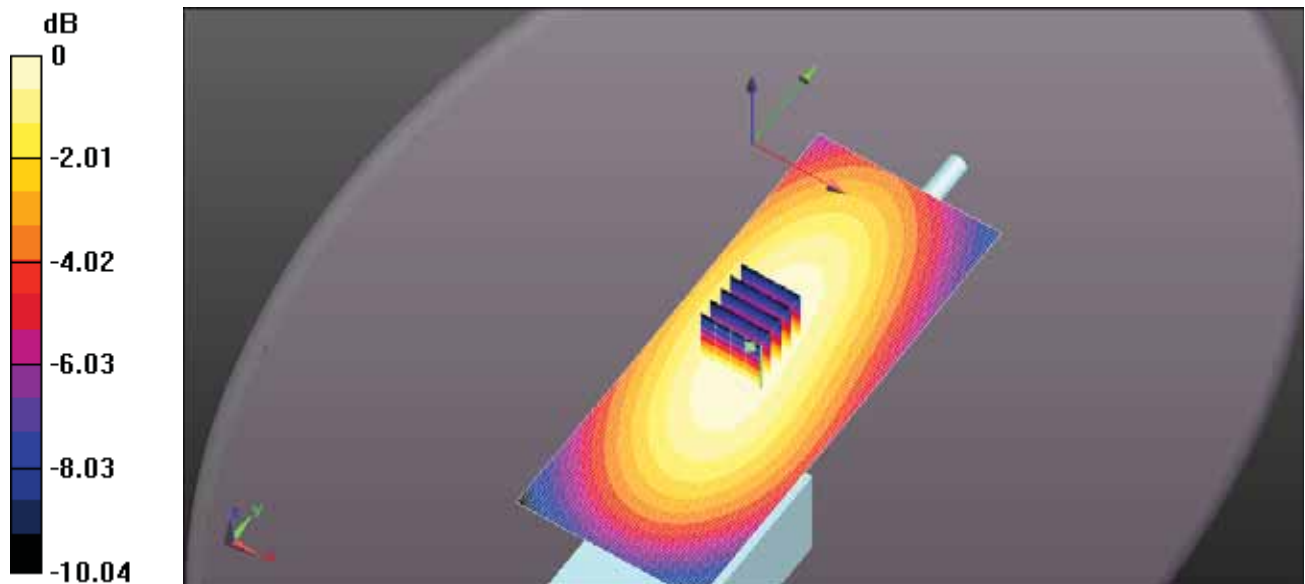
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 50.31 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 2.59 W/kg

SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.51 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.22 W/kg



0 dB = 2.25 W/kg = 3.52 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 165mm 400 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 400 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 400$ MHz; $\sigma = 0.731$ S/m; $\epsilon_r = 43.753$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 6.73 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

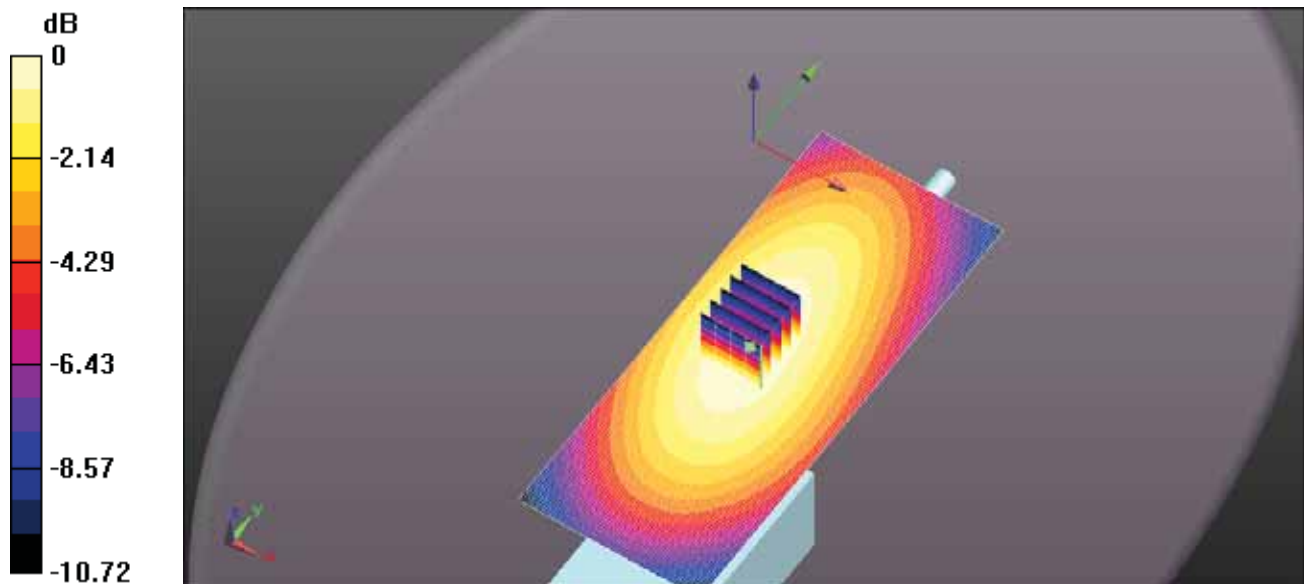
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 90.88 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 7.55 W/kg

SAR(1 g) = 5.99 W/kg; SAR(10 g) = 4.58 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.59 W/kg



0 dB = 6.73 W/kg = 8.28 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 165mm 425 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 425 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 425 \text{ MHz}$; $\sigma = 0.789 \text{ S/m}$; $\epsilon_r = 43.355$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.90 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

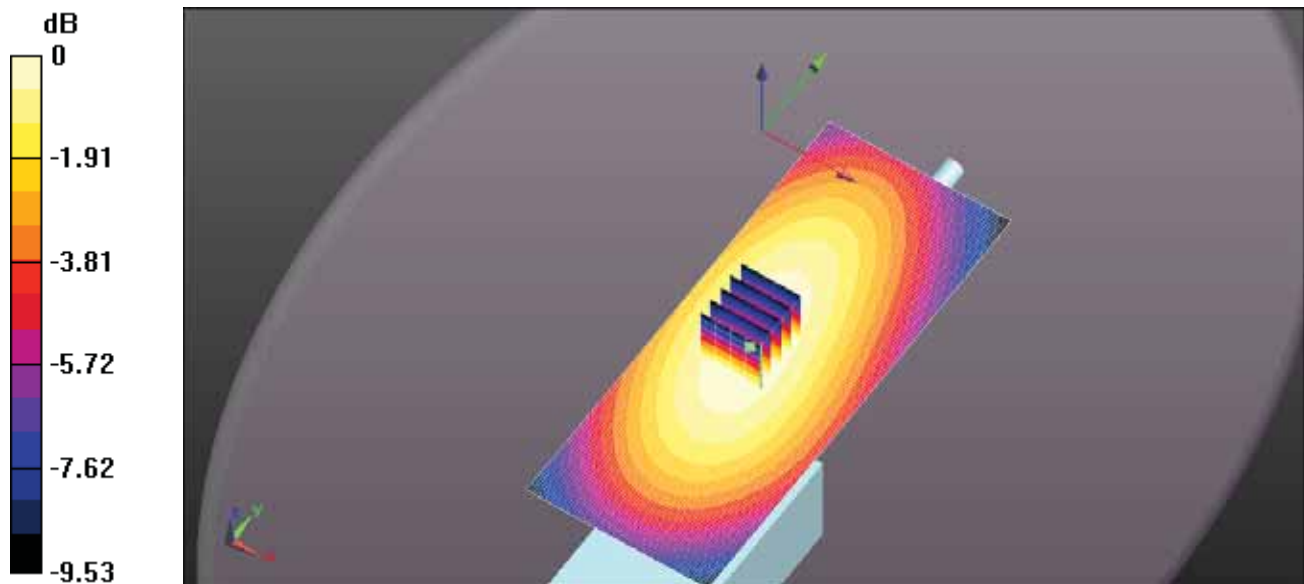
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 75.70 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 5.67 W/kg

SAR(1 g) = 4.46 W/kg ; SAR(10 g) = 3.38 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.93 W/kg



0 dB = 4.90 W/kg = 6.90 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 165mm 455 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transciever ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 455 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 455 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 43.95$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.68 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

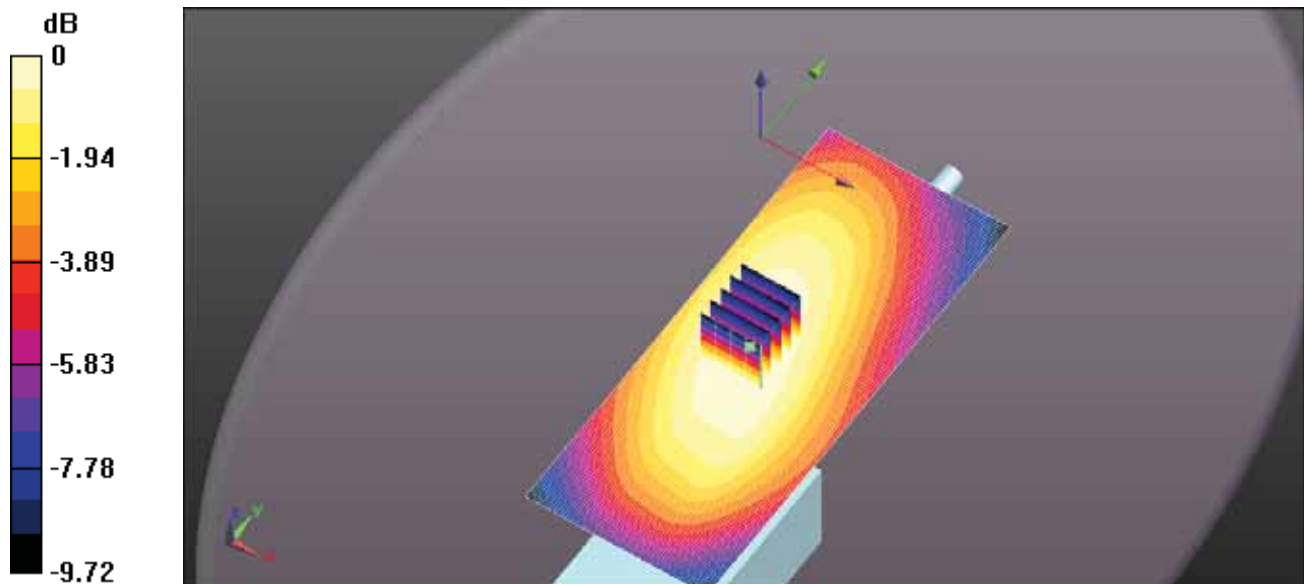
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 61.48 V/m ; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 3.98 W/kg

SAR(1 g) = 3.13 W/kg ; SAR(10 g) = 2.36 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.44 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 156mm 420 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 420 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 420$ MHz; $\sigma = 0.777$ S/m; $\epsilon_r = 43.352$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 6.27 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

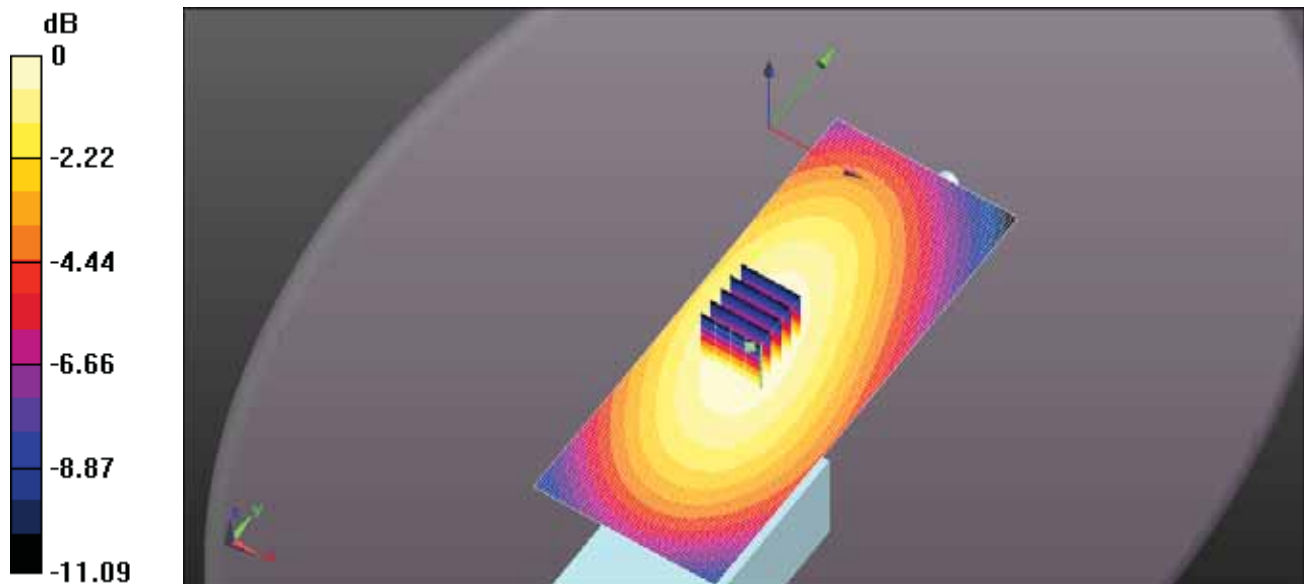
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 85.35 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 6.96 W/kg

SAR(1 g) = 5.61 W/kg; SAR(10 g) = 4.28 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.15 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 156mm 395 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 395 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 395$ MHz; $\sigma = 0.723$ S/m; $\epsilon_r = 43.966$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 7.02 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

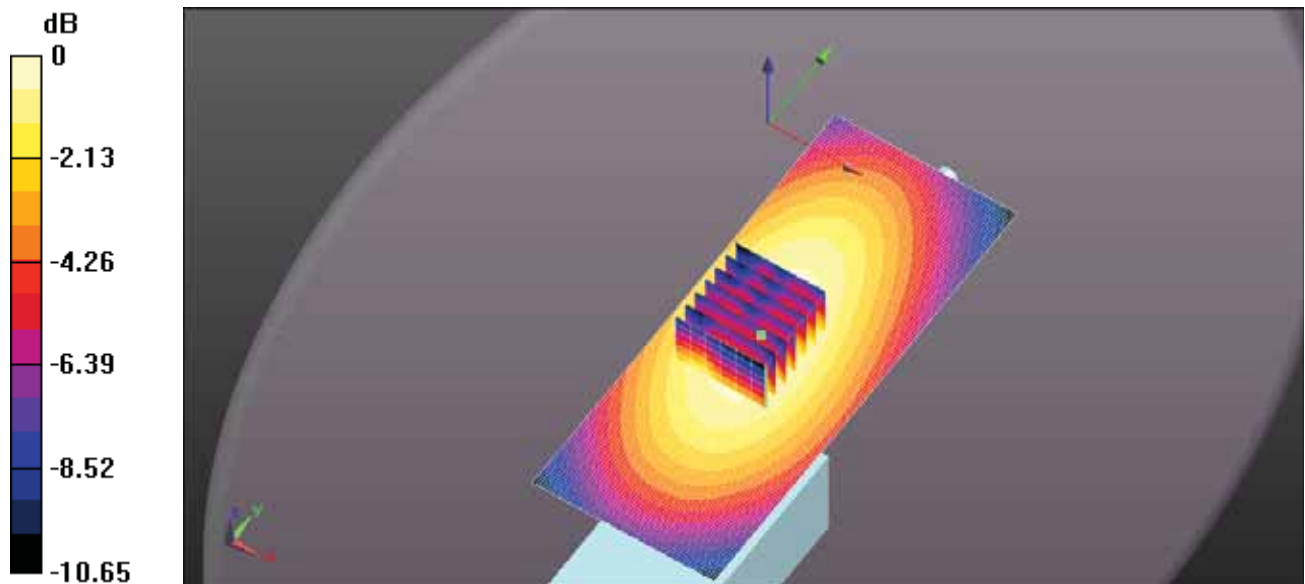
(7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 92.23 V/m; Power Drift = -1.59 dB

Peak SAR (extrapolated) = 7.74 W/kg

SAR(1 g) = 5.92 W/kg; SAR(10 g) = 4.41 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.62 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 156mm 455 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transciever ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 455 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 455 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 43.95$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.58 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

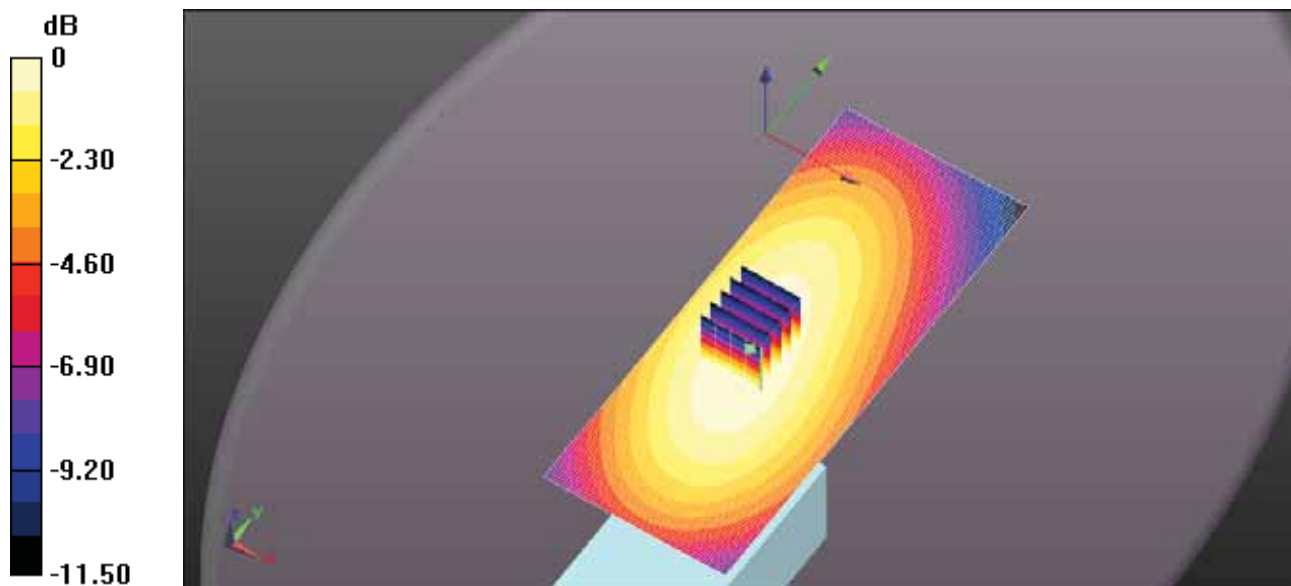
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 71.37 V/m ; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 5.22 W/kg

SAR(1 g) = 4.13 W/kg ; SAR(10 g) = 3.12 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.59 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 148mm 440 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 440 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 440$ MHz; $\sigma = 0.815$ S/m; $\epsilon_r = 43.588$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 6.38 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

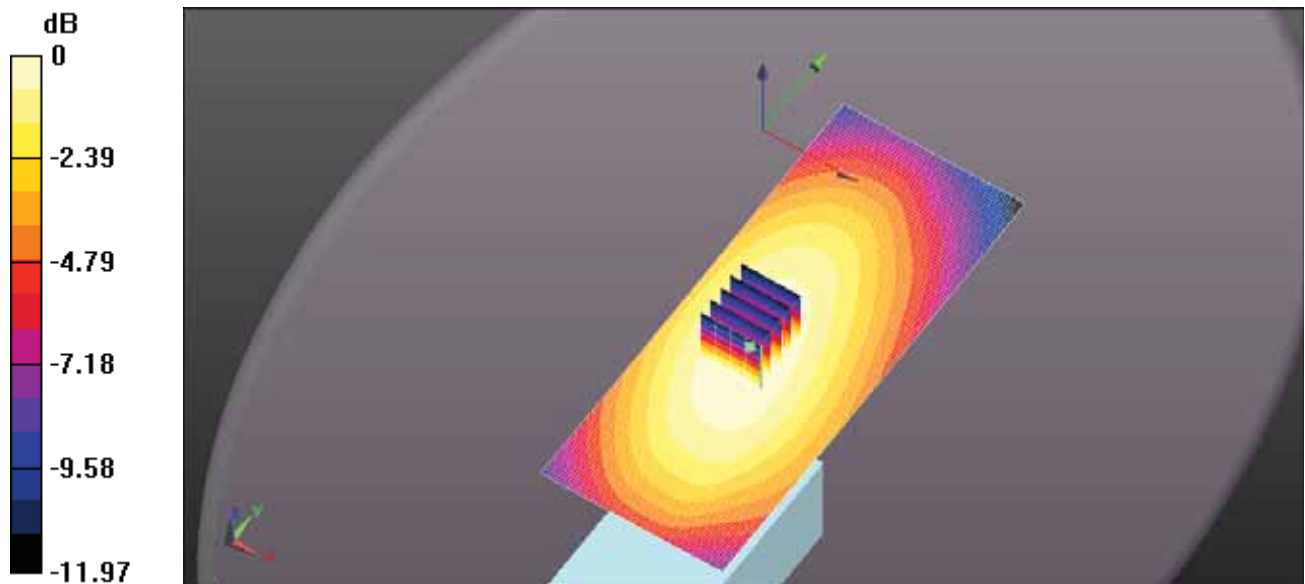
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 84.11 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 6.97 W/kg

SAR(1 g) = 5.59 W/kg; SAR(10 g) = 4.25 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.14 W/kg



0 dB = 6.38 W/kg = 8.05 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 148mm 410 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 410 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 410$ MHz; $\sigma = 0.753$ S/m; $\epsilon_r = 43.529$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 6.46 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

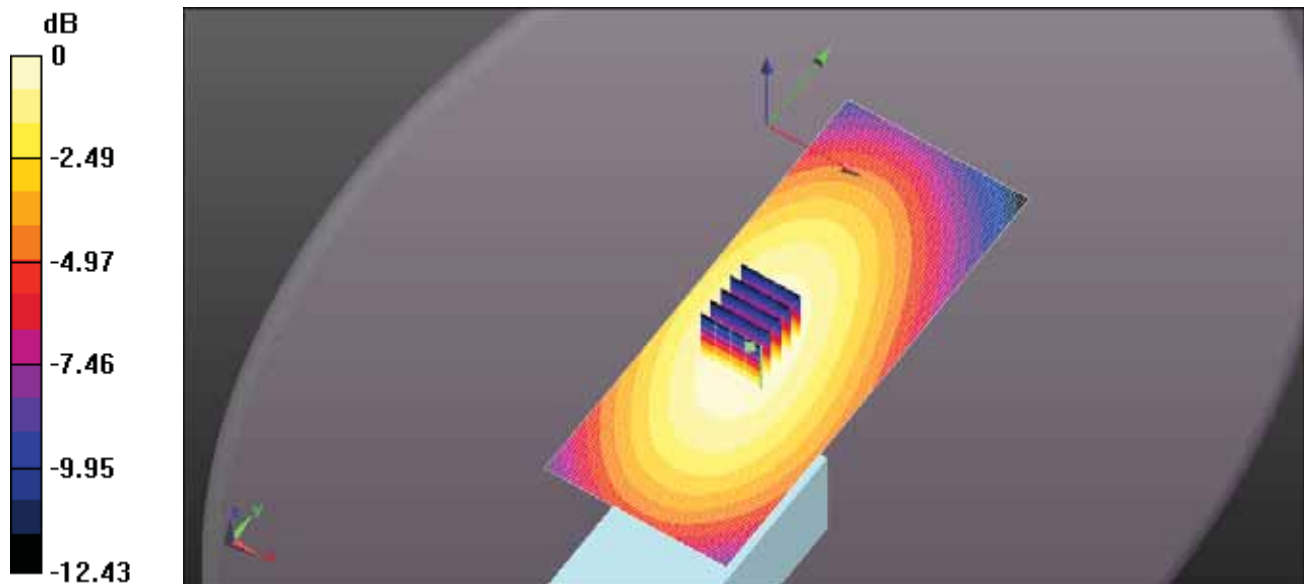
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 87.18 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 6.96 W/kg

SAR(1 g) = 5.56 W/kg; SAR(10 g) = 4.26 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.11 W/kg



0 dB = 6.46 W/kg = 8.10 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 148mm 380 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 380 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 380 \text{ MHz}$; $\sigma = 0.713 \text{ S/m}$; $\epsilon_r = 44.66$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.89 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

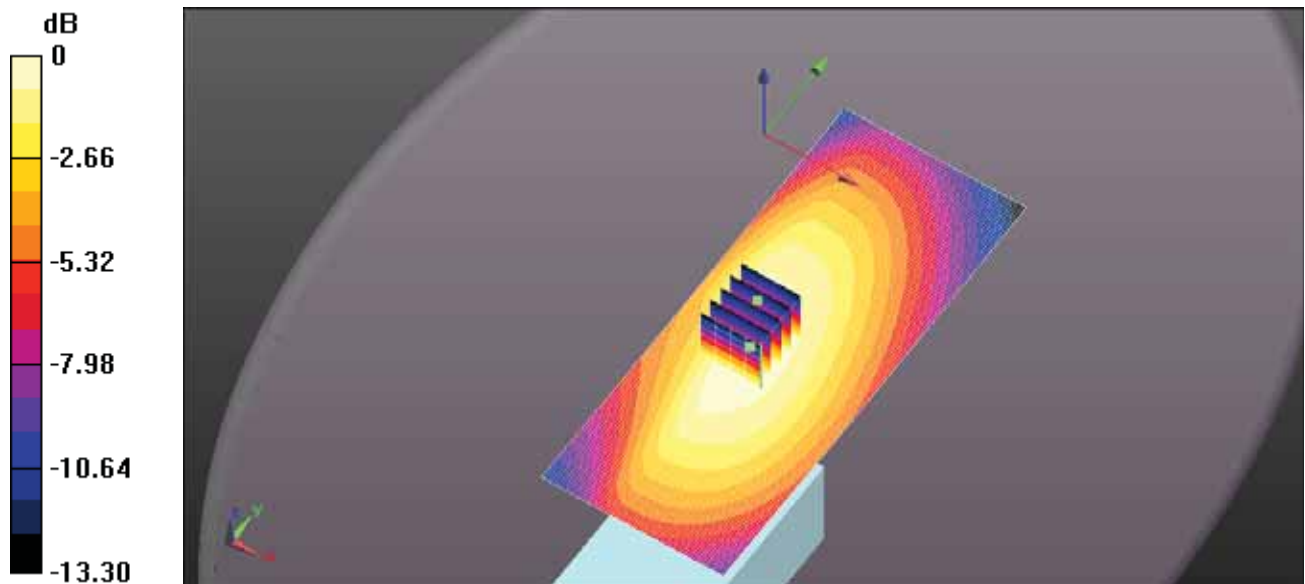
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.07 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.78 W/kg

SAR(1 g) = 2.2 W/kg ; SAR(10 g) = 1.69 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.44 W/kg



0 dB = 3.89 W/kg = 5.90 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 148mm 470 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transciever ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.83 \text{ S/m}$; $\epsilon_r = 43.826$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.60 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

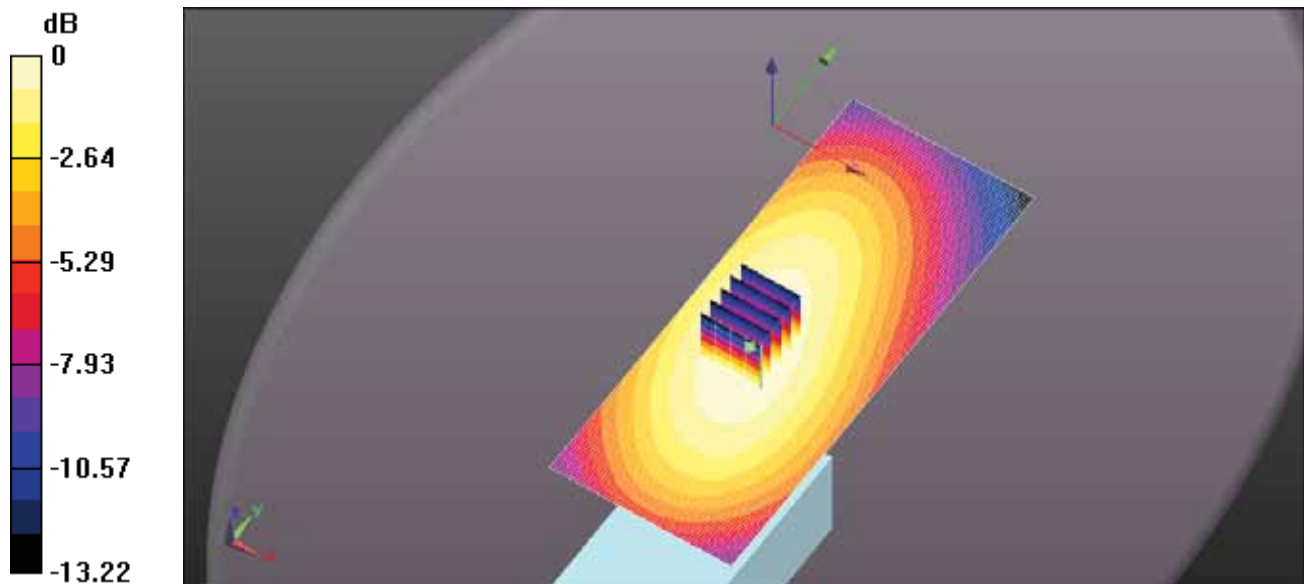
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 70.84 V/m ; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 5.19 W/kg

SAR(1 g) = 4.09 W/kg ; SAR(10 g) = 3.09 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.53 W/kg



0 dB = 4.60 W/kg = 6.63 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 142mm 460 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 460 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 460$ MHz; $\sigma = 0.833$ S/m; $\epsilon_r = 43.935$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 5.58 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

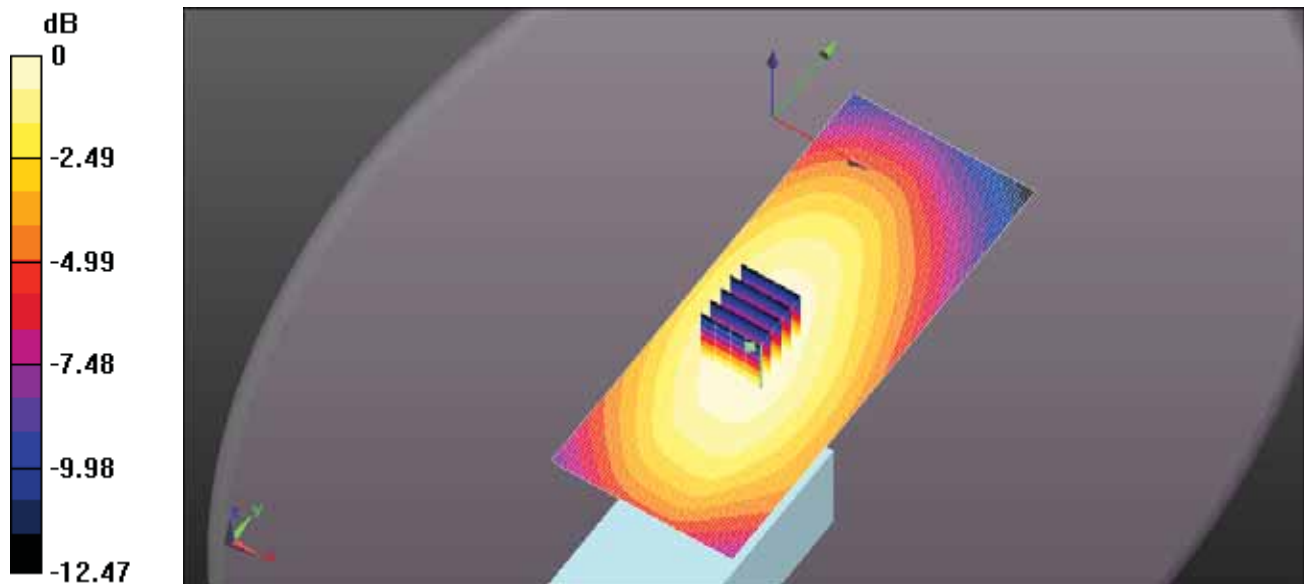
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 76.02 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 5.87 W/kg

SAR(1 g) = 4.65 W/kg; SAR(10 g) = 3.51 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.15 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 142mm 425 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transciever ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 425 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 425 \text{ MHz}$; $\sigma = 0.789 \text{ S/m}$; $\epsilon_r = 43.355$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.22 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

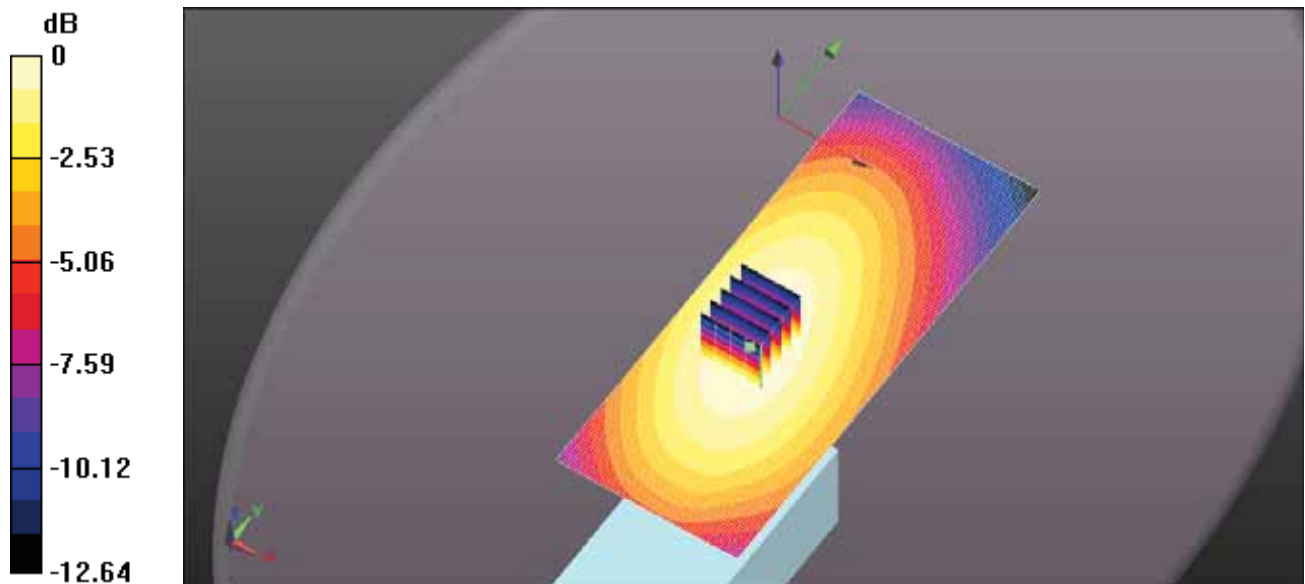
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 83.84 V/m ; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 6.96 W/kg

SAR(1 g) = 5.6 W/kg ; SAR(10 g) = 4.26 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.19 W/kg



0 dB = 6.22 W/kg = 7.94 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 142mm 395 MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver ; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 395 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 395$ MHz; $\sigma = 0.723$ S/m; $\epsilon_r = 43.966$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.43, 10.43, 10.43); Calibrated: 3/20/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Area Scan (61x151x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 6.03 W/kg

Configuration_Head_IC-F7020T/Head Front, P=5W, d=25mm/Zoom Scan (5x5x7)

(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 87.02 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 6.86 W/kg

SAR(1 g) = 5.52 W/kg; SAR(10 g) = 4.25 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.09 W/kg

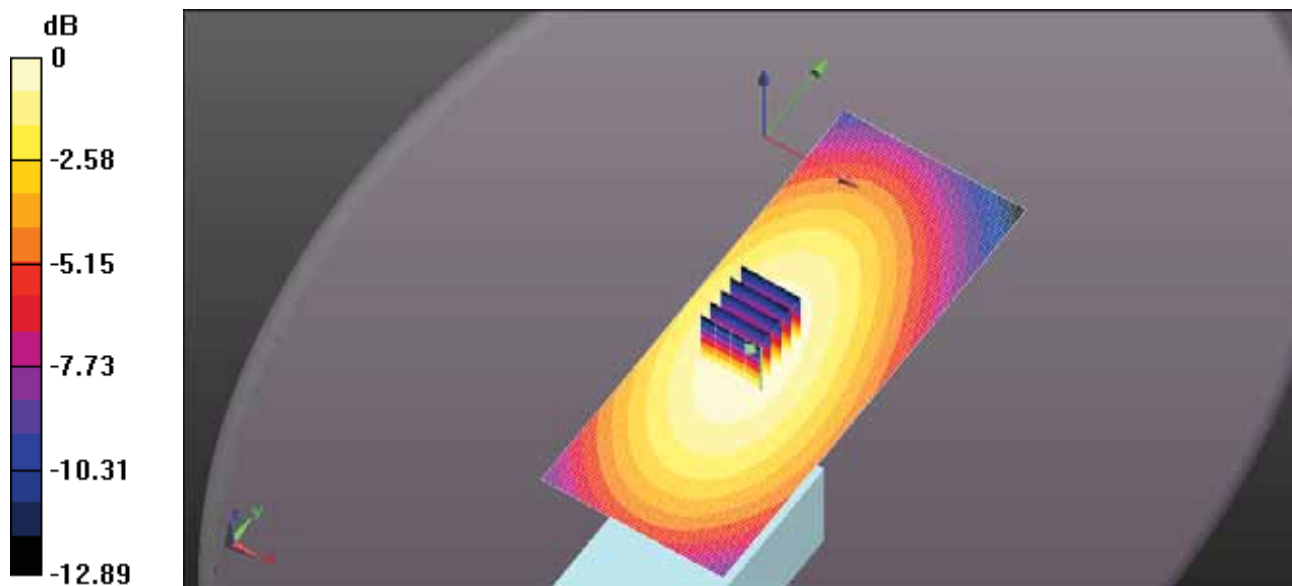


EXHIBIT 3. BODY SAR MEASUREMENTS

Antenna	Power (dBm)	CH	CH. Freq	BODY SAR1g (W/Kg)	BODY SAR10g (W/Kg)
				BP-283	BP-283
			(MHz)	2010mAh	2010mAh
FA-S81U 380-430 MHz	32.27	1	380	5.69	4.28
	37.21	2	392.5	4.23	3.18
	37.23	5	405	2.97	2.21
	37.15	8	417.5	2.81	2.08
	37.09	11	430	2.56	1.88
FA-S82U 430-480 MHz	37.09	11	430	7.24	5.28
	37.32	14	450	5.33	3.9
	37.17	17	470	3.8	2.8
FA-S83U 470-520 MHz	37.17	17	470	6.47	4.76
FA-S81US 400-450 MHz	37.23	4	400	5.54	4.1
	37.20	7	412.5	5.95	4.41
	37.07	10	425	4.56	3.34
	37.14	12	437.5	2.67	2.00
	37.32	14	450	1.82	1.33
FA-S82US 450-490 MHz	37.32	14	450	4.29	3.16
	37.42	16	460	5.44	4.05
	37.17	17	470	5.3	3.94

Cut Antenna	Power (dBm)	CH	CH. Freq	BODY SAR1g (W/Kg)	BODY SAR10g (W/Kg)
				BP-283	BP-283
			(MHz)	2010mAh	2010mAh
FA-S76UC 360-520 MHz 175mm 380MHz	32.27	1	380	6.78	5.12
	37.23	3	395		
	37.26	6	410	4.19	3.12
	37.07	10	425		
	37.17	13	440	3.19	2.38
	37.43	15	455		
	37.17	17	470	2.24	1.66
FA-S76UC 360-520 MHz 165mm 400MHz	32.27	1	380		
	37.23	4	400	6.64	4.96
	37.26	6	410		
	37.07	10	425	5.19	3.88
	37.17	13	440		
	37.43	15	455	3.35	2.48
	37.17	17	470		
FA-S76UC 360-520 MHz 156mm 420MHz	32.27	1	380		
	37.23	3	395	7.39	5.55
	37.26	6	410		
	37.13	9	420	6.99	5.23
	37.17	13	440		
	37.43	15	455	4.56	3.39
	37.17	17	470		
FA-S76UC 360-520 MHz 148mm 440MHz	32.27	1	380	5.74	4.31
	37.23	3	395		
	37.26	6	410	6.99	5.2
	37.07	10	425		
	37.17	13	440	5.31	3.95
	37.43	15	455		
	37.17	17	470	4.96	3.69
FA-S76UC 360-520 MHz 142mm 460MHz	32.27	1	380	5.64	4.23
	37.23	3	395	6.63	4.93
	37.26	6	410		
	37.07	10	425	7.16	5.32
	37.17	13	440		
	37.42	16	460	5.54	4.12
	37.17	17	470		

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 380MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 380 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 380 \text{ MHz}$; $\sigma = 0.844 \text{ S/m}$; $\epsilon_r = 58.451$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 7.55 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

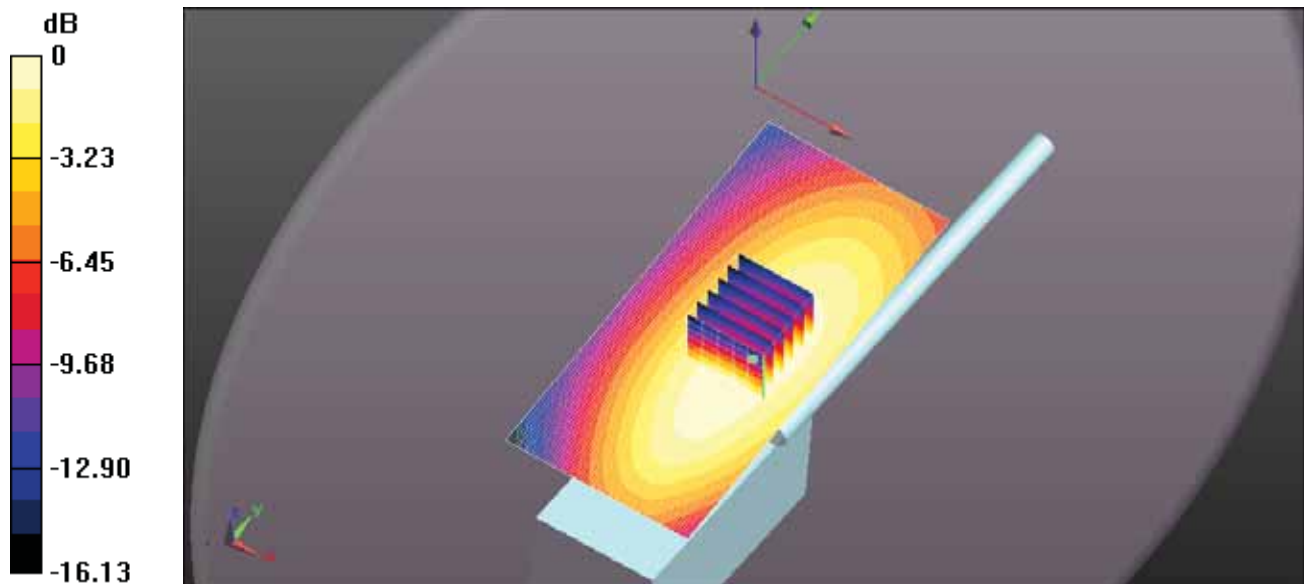
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 86.29 V/m ; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 7.43 W/kg

SAR(1 g) = 5.69 W/kg ; SAR(10 g) = 4.28 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.31 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 392.5MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 392.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 392.5$ MHz; $\sigma = 0.842$ S/m; $\epsilon_r = 58.507$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 5.62 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

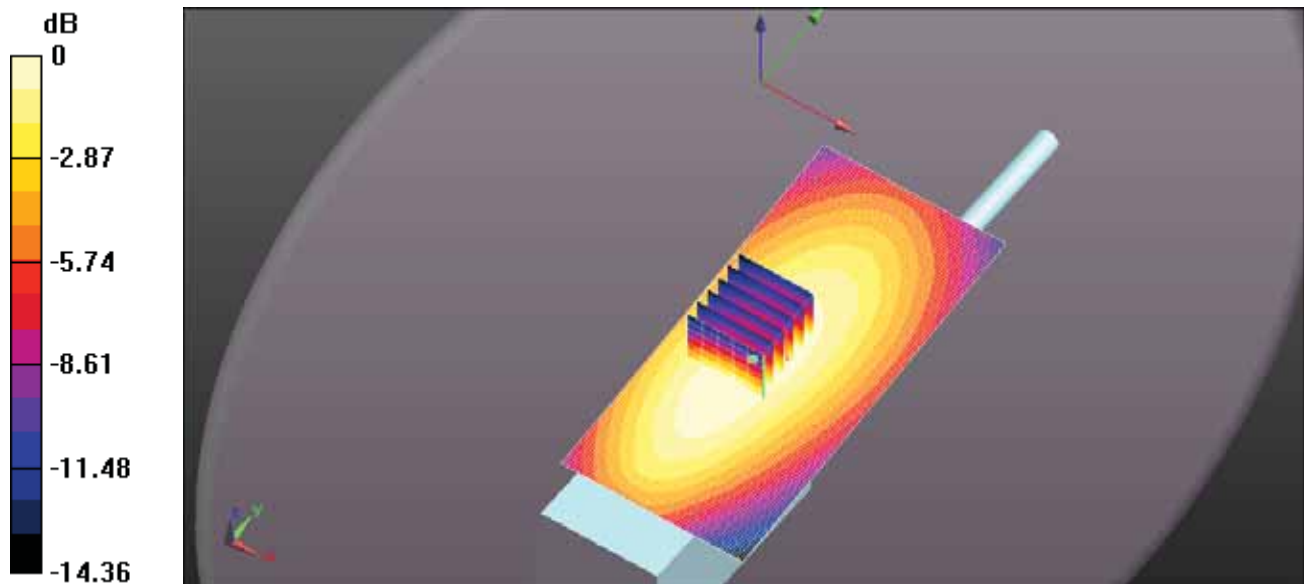
(6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 74.45 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 5.55 W/kg

SAR(1 g) = 4.23 W/kg; SAR(10 g) = 3.18 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.70 W/kg



0 dB = 5.62 W/kg = 7.50 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 405MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 405 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 405 \text{ MHz}$; $\sigma = 0.846 \text{ S/m}$; $\epsilon_r = 58.474$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.00 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

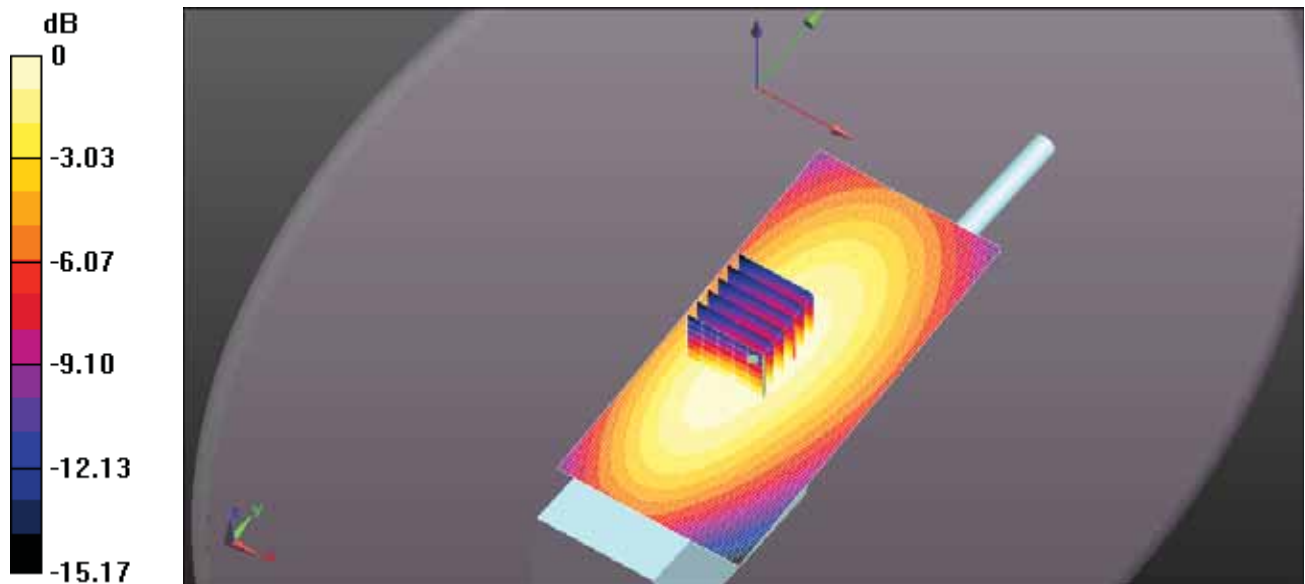
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 63.65 V/m ; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.91 W/kg

SAR(1 g) = 2.97 W/kg ; SAR(10 g) = 2.21 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.29 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 417.5MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 417.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 417.5$ MHz; $\sigma = 0.857$ S/m; $\epsilon_r = 58.197$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.80 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

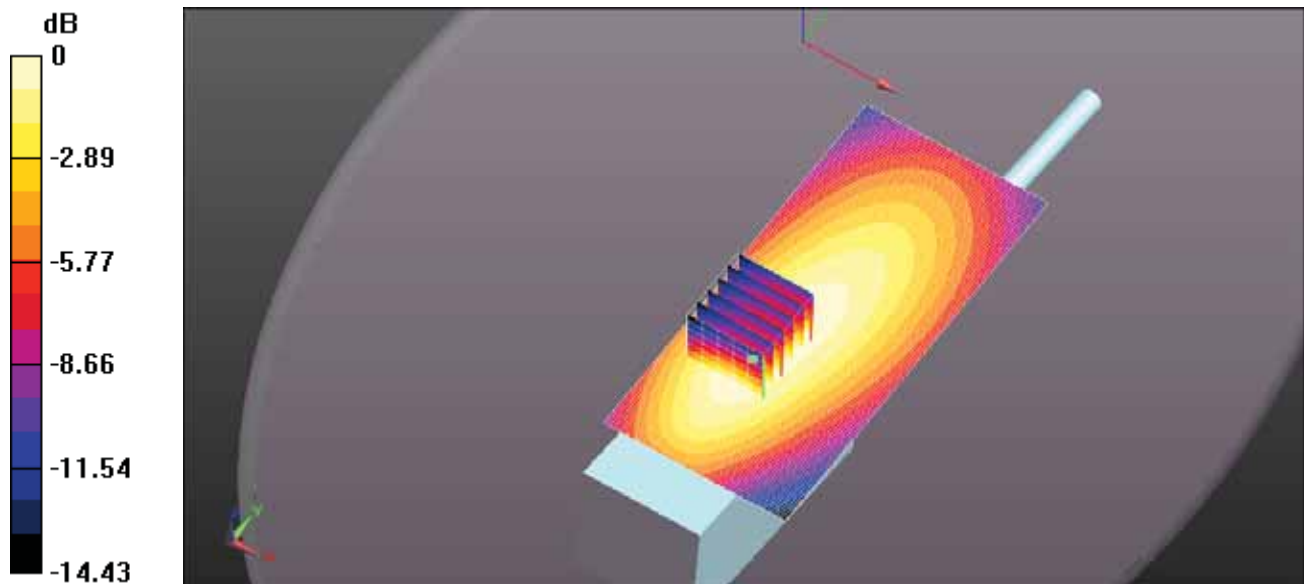
(6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 57.39 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.73 W/kg

SAR(1 g) = 2.81 W/kg; SAR(10 g) = 2.08 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.13 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81U 430MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 430 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 430 \text{ MHz}$; $\sigma = 0.871 \text{ S/m}$; $\epsilon_r = 57.831$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.51 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

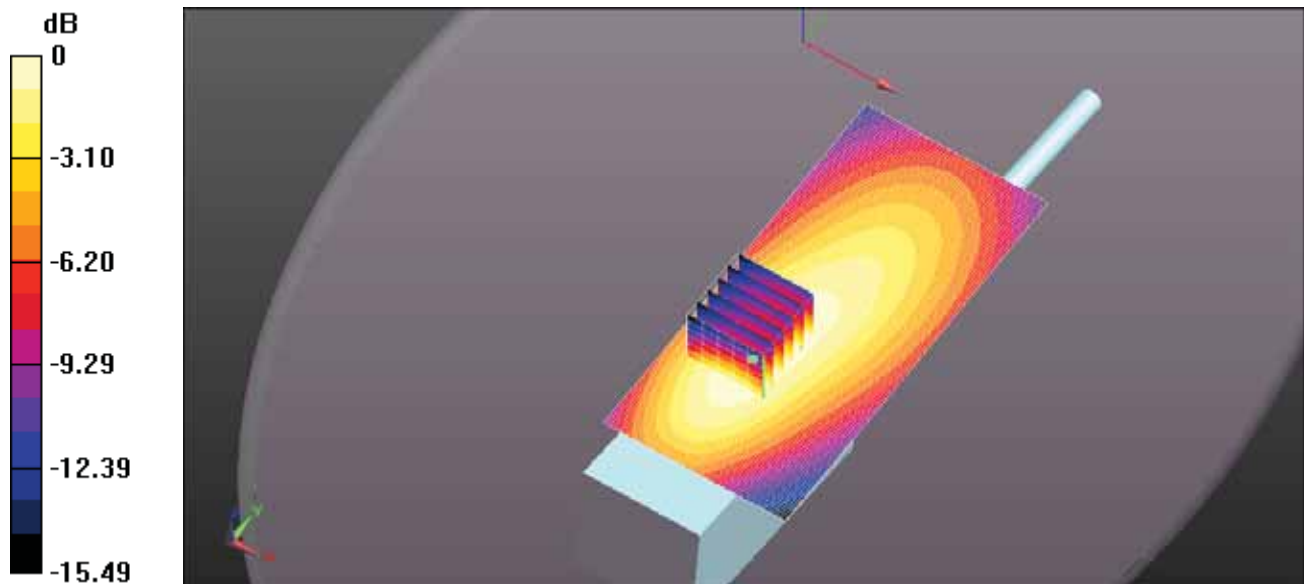
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 53.37 V/m ; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.43 W/kg

SAR(1 g) = 2.56 W/kg ; SAR(10 g) = 1.88 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.86 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82U 430MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 430 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 430 \text{ MHz}$; $\sigma = 0.871 \text{ S/m}$; $\epsilon_r = 57.831$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 9.96 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

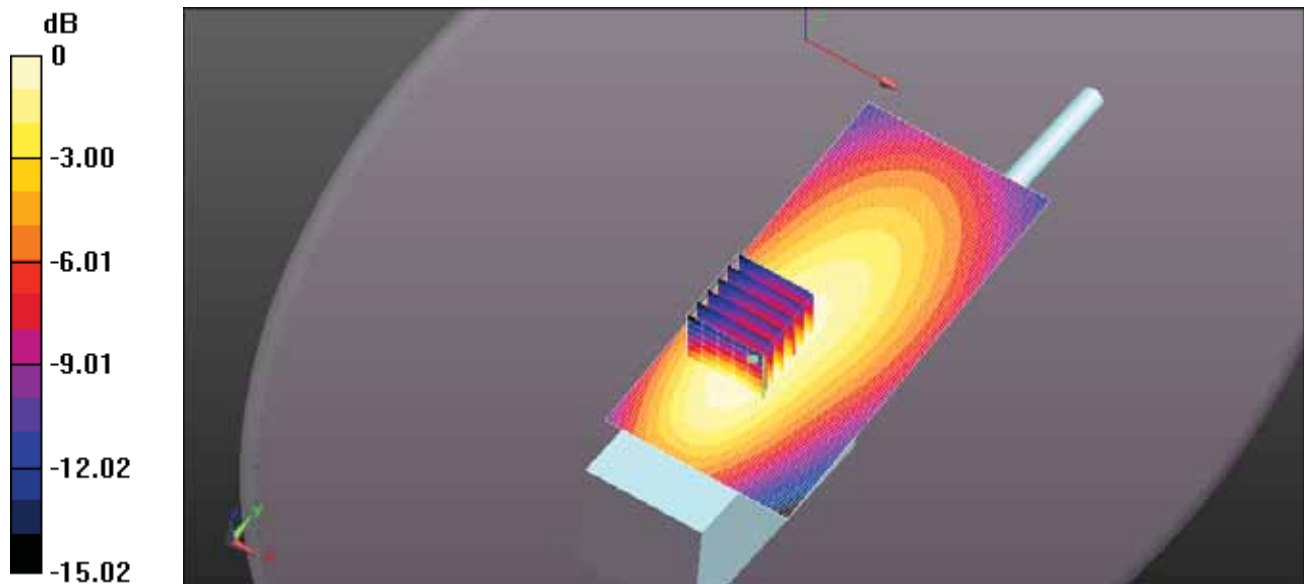
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 86.63 V/m ; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 9.72 W/kg

SAR(1 g) = 7.24 W/kg ; SAR(10 g) = 5.28 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 8.10 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82U 450MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 57.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.93 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

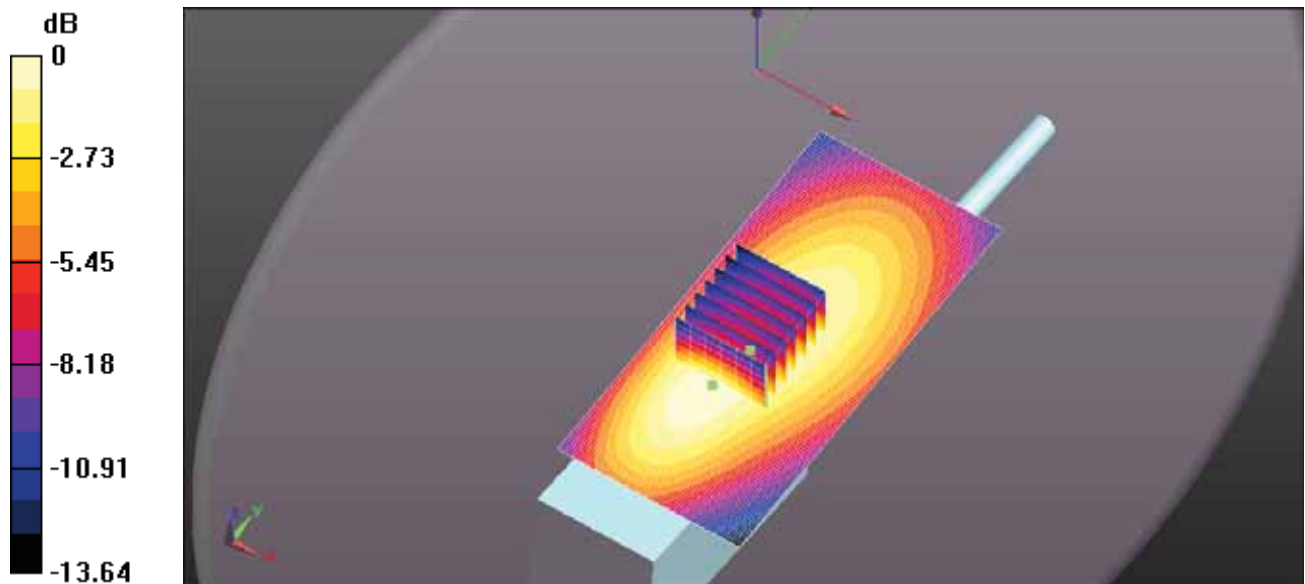
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 81.31 V/m ; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 6.80 W/kg

SAR(1 g) = 5.33 W/kg ; SAR(10 g) = 3.9 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.70 W/kg



0 dB = 6.93 W/kg = 8.40 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82U 470MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.929 \text{ S/m}$; $\epsilon_r = 56.979$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 5.15 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

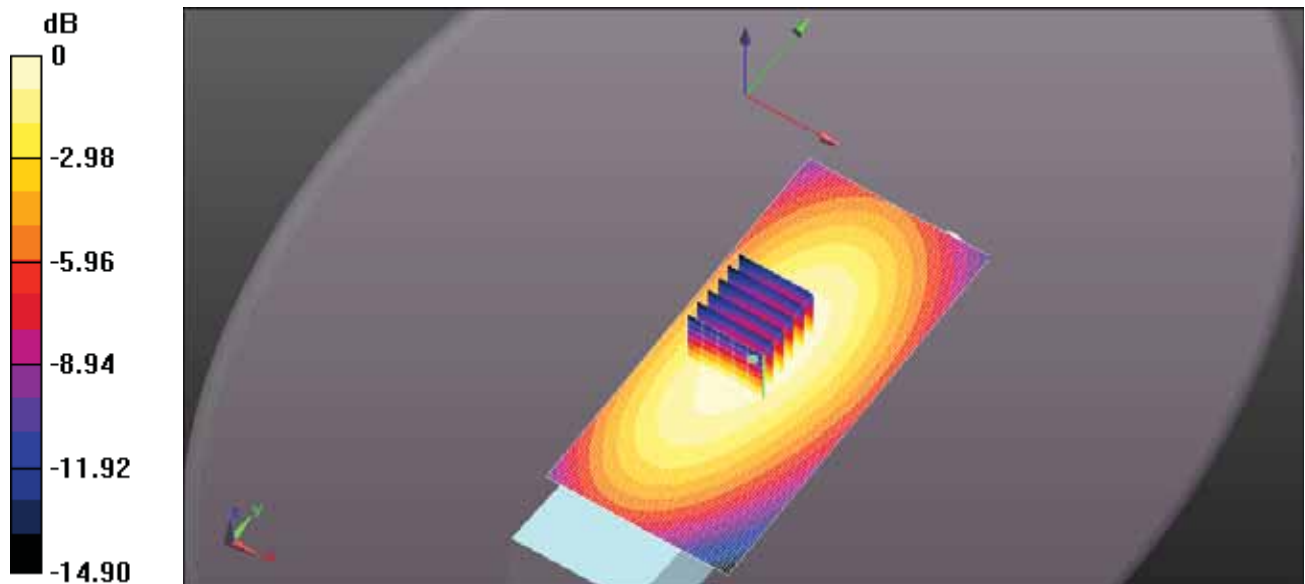
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 70.83 V/m ; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 5.08 W/kg

SAR(1 g) = 3.8 W/kg ; SAR(10 g) = 2.8 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.25 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S83U 470MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.929 \text{ S/m}$; $\epsilon_r = 56.979$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 9.10 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

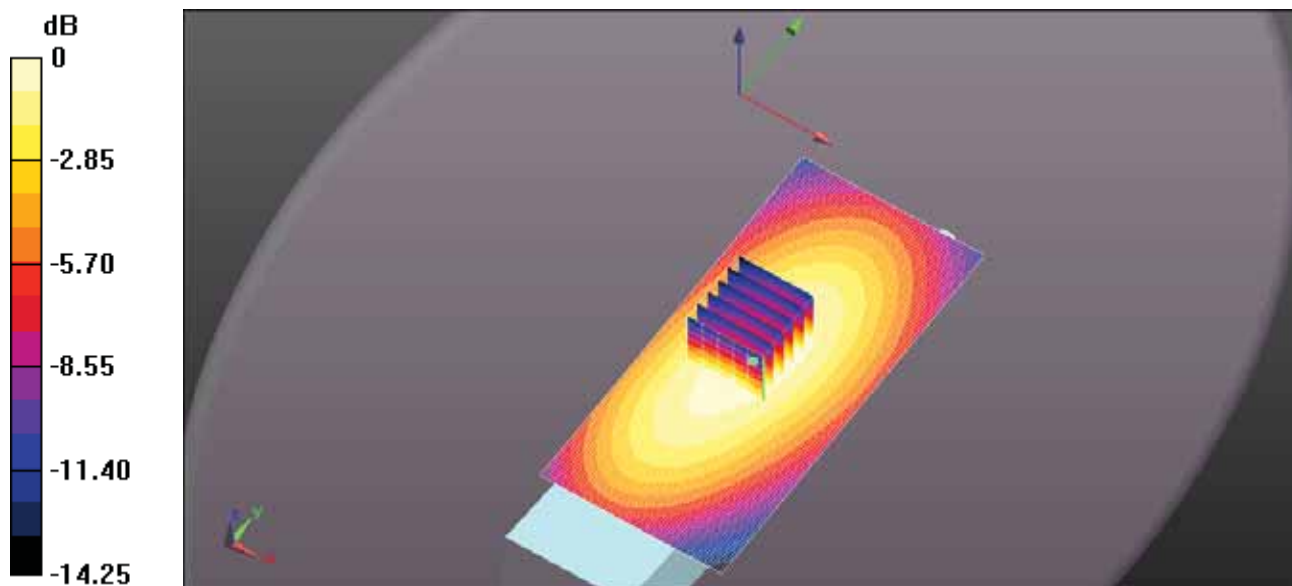
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 92.49 V/m ; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 8.62 W/kg

SAR(1 g) = 6.47 W/kg ; SAR(10 g) = 4.76 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 7.21 W/kg



0 dB = 9.10 W/kg = 9.59 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 400MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 400 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 400 \text{ MHz}$; $\sigma = 0.844 \text{ S/m}$; $\epsilon_r = 58.438$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 7.95 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

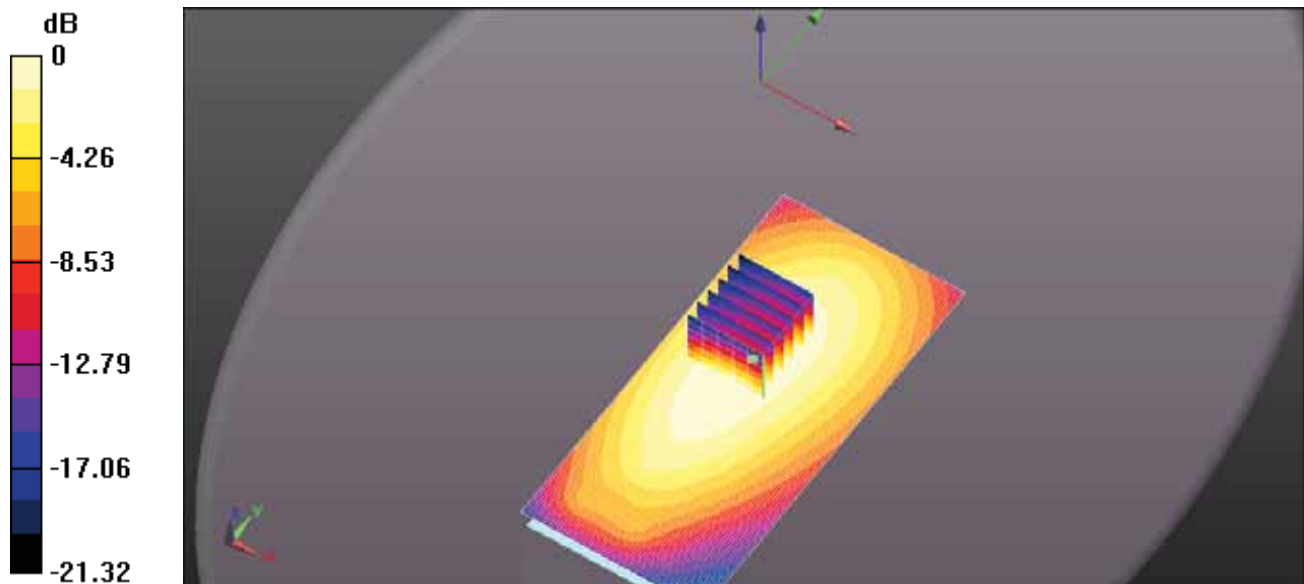
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 83.89 V/m ; Power Drift = -0.30 dB

Peak SAR (extrapolated) = 7.36 W/kg

SAR(1 g) = 5.54 W/kg ; SAR(10 g) = 4.1 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.17 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 412.5MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 412.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 412.5$ MHz; $\sigma = 0.852$ S/m; $\epsilon_r = 58.307$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 7.93 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

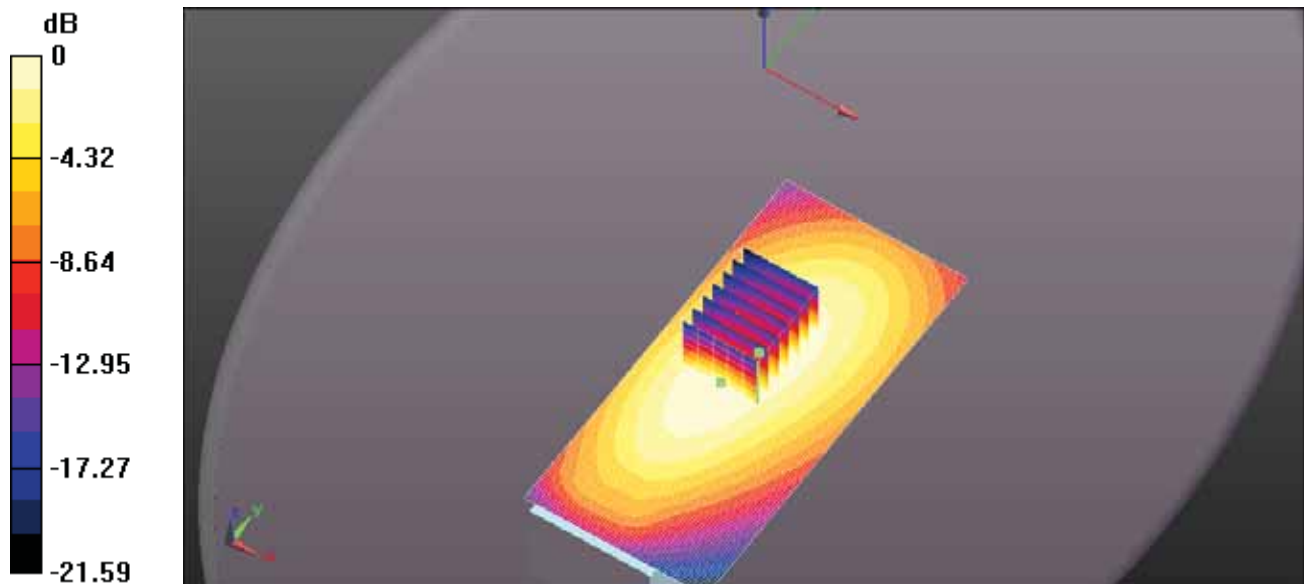
(6x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 82.69 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 7.89 W/kg

SAR(1 g) = 5.95 W/kg; SAR(10 g) = 4.41 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.62 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 425MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 425 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 425 \text{ MHz}$; $\sigma = 0.866 \text{ S/m}$; $\epsilon_r = 58.005$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.30 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

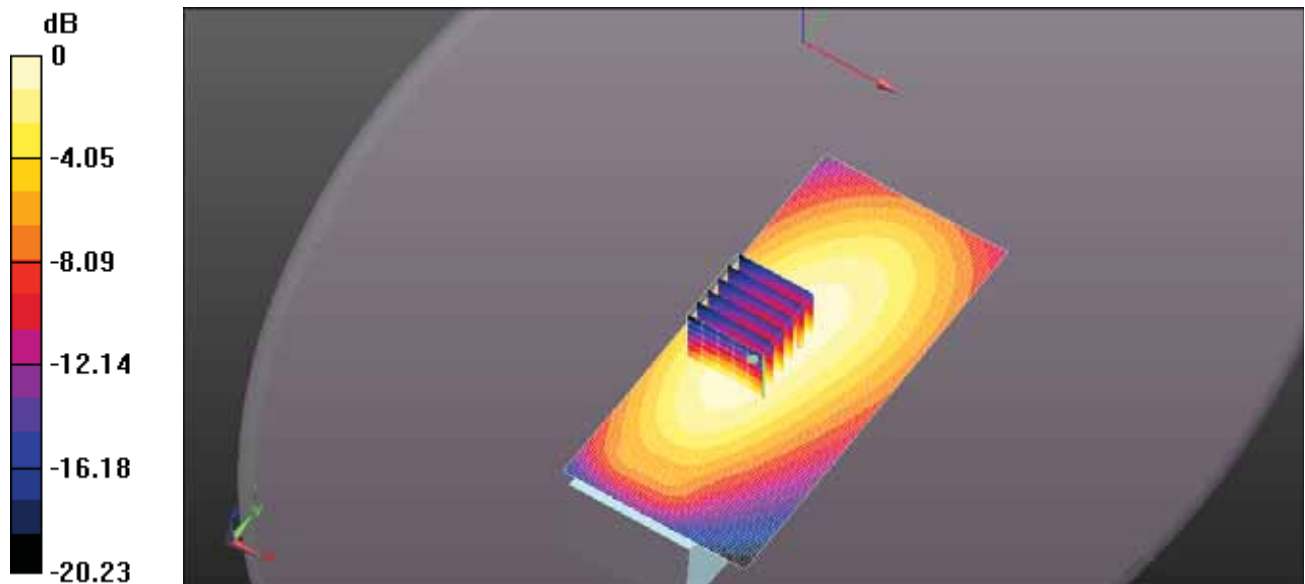
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 69.39 V/m ; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 6.12 W/kg

SAR(1 g) = 4.56 W/kg ; SAR(10 g) = 3.34 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.11 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 437.5MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 437.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 437.5$ MHz; $\sigma = 0.884$ S/m; $\epsilon_r = 57.631$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.66 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

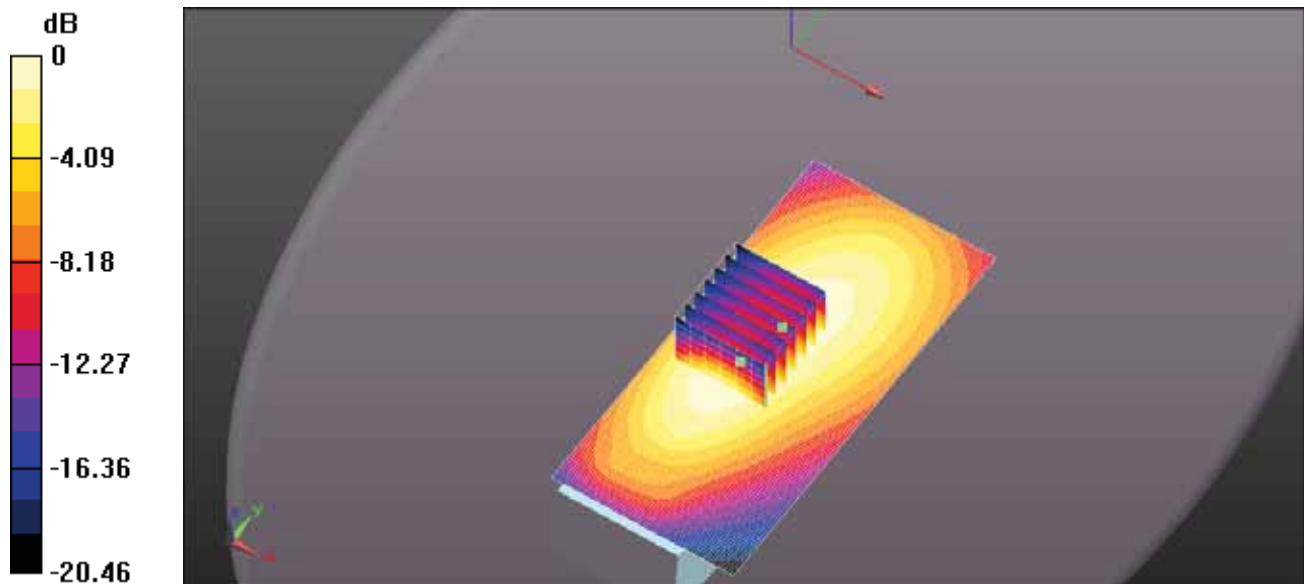
(7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 55.68 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 3.52 W/kg

SAR(1 g) = 2.67 W/kg; SAR(10 g) = 2 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.97 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S81US 450MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 57.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 2.37 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

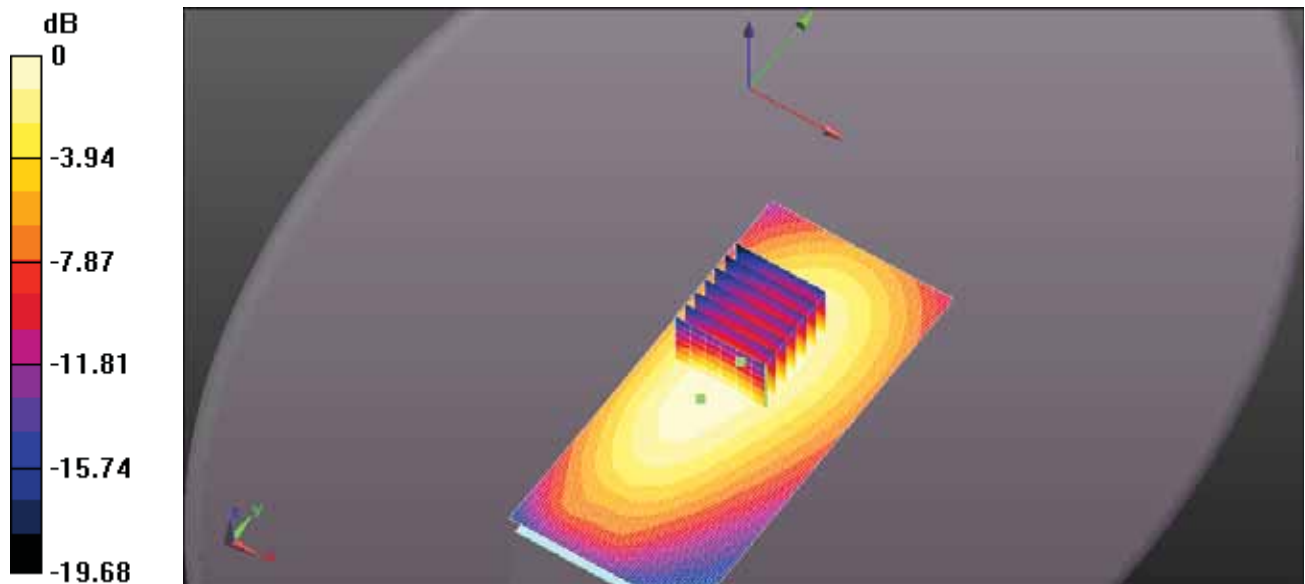
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 45.88 V/m ; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.31 W/kg

SAR(1 g) = 1.82 W/kg ; SAR(10 g) = 1.33 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.93 W/kg



0 dB = 2.37 W/kg = 3.75 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82US 450MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 57.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 5.72 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

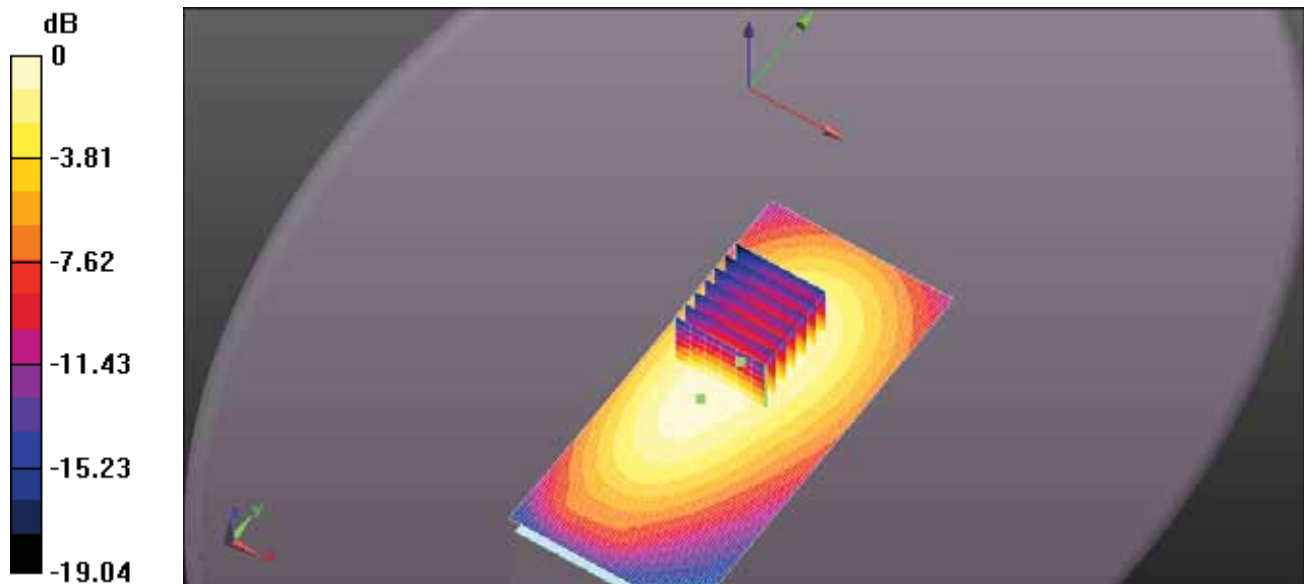
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 70.51 V/m ; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 5.46 W/kg

SAR(1 g) = 4.29 W/kg ; SAR(10 g) = 3.16 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.57 W/kg



0 dB = 5.72 W/kg = 7.57 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82US 460MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 460 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 460$ MHz; $\sigma = 0.918$ S/m; $\epsilon_r = 57.119$; $\rho = 1000$ kg/m³; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 7.42 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

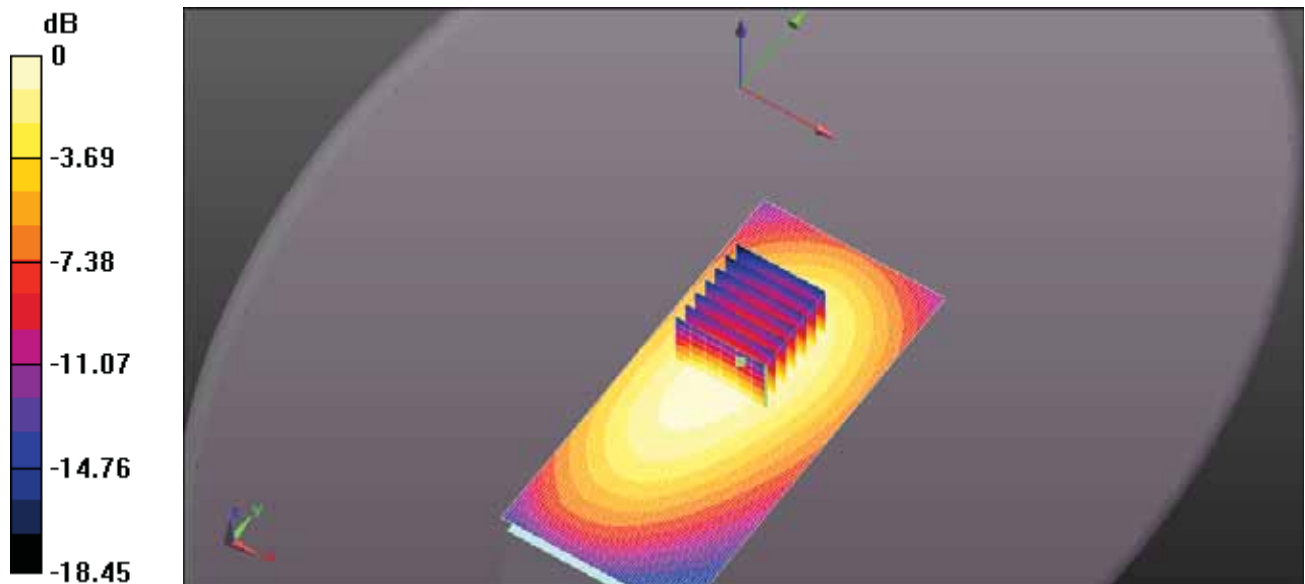
(7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 79.61 V/m; Power Drift = -0.24 dB

Peak SAR (extrapolated) = 7.19 W/kg

SAR(1 g) = 5.44 W/kg; SAR(10 g) = 4.05 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.04 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S82US 470MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.929 \text{ S/m}$; $\epsilon_r = 56.979$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 7.28 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

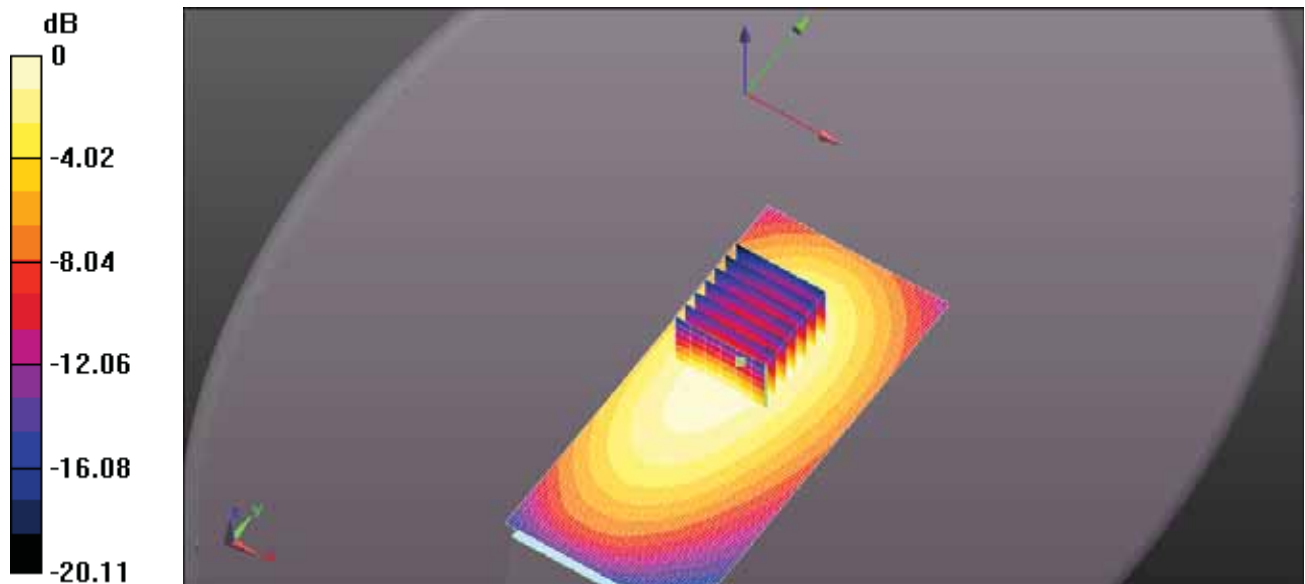
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 77.13 V/m ; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 7.03 W/kg

SAR(1 g) = 5.3 W/kg ; SAR(10 g) = 3.94 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.90 W/kg



0 dB = 7.28 W/kg = 8.62 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 175mm 380MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 380 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 380 \text{ MHz}$; $\sigma = 0.844 \text{ S/m}$; $\epsilon_r = 58.451$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 9.15 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

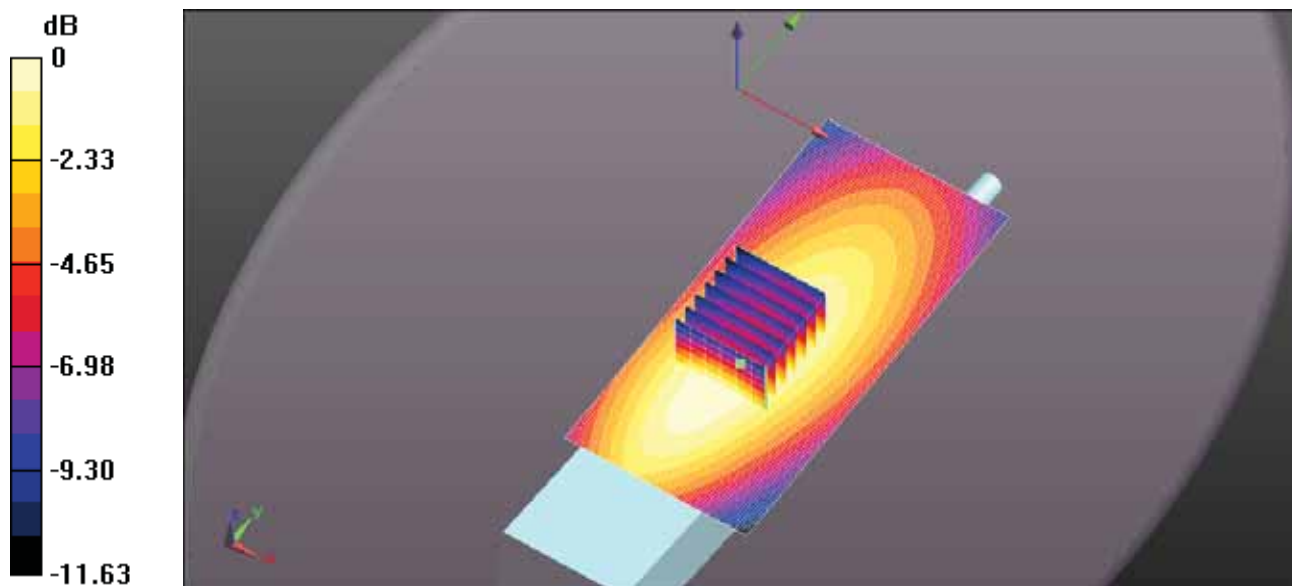
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 98.62 V/m ; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 8.83 W/kg

SAR(1 g) = 6.78 W/kg ; SAR(10 g) = 5.12 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 7.50 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 175mm 410MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 410 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 410 \text{ MHz}$; $\sigma = 0.85 \text{ S/m}$; $\epsilon_r = 58.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 5.57 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

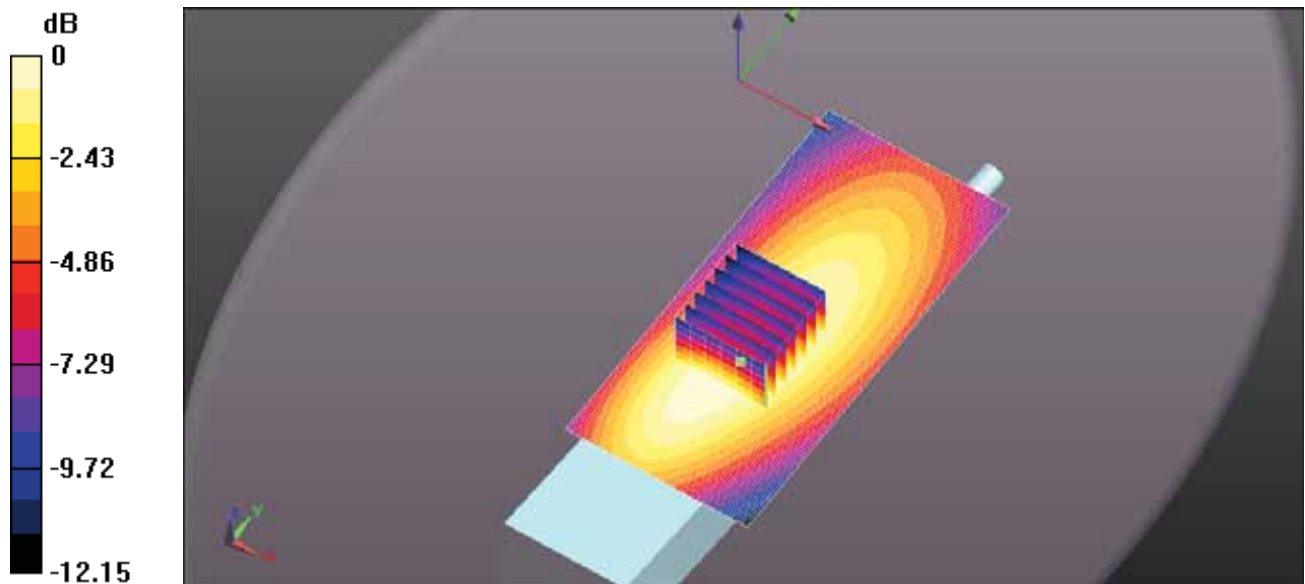
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 77.16 V/m ; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 5.54 W/kg

SAR(1 g) = 4.19 W/kg ; SAR(10 g) = 3.12 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.66 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 175mm 440MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 440 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 440 \text{ MHz}$; $\sigma = 0.888 \text{ S/m}$; $\epsilon_r = 57.569$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.34 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

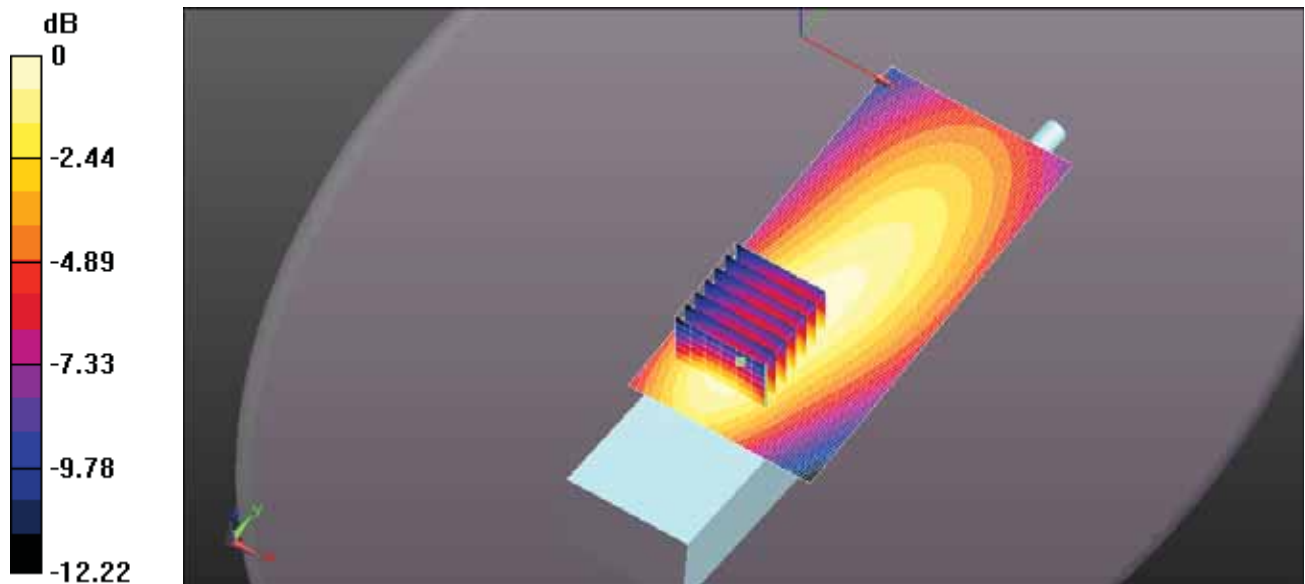
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 64.88 V/m ; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 4.18 W/kg

SAR(1 g) = 3.19 W/kg ; SAR(10 g) = 2.38 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.53 W/kg



0 dB = 4.34 W/kg = 6.38 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 175mm 470MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.929 \text{ S/m}$; $\epsilon_r = 56.979$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.04 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

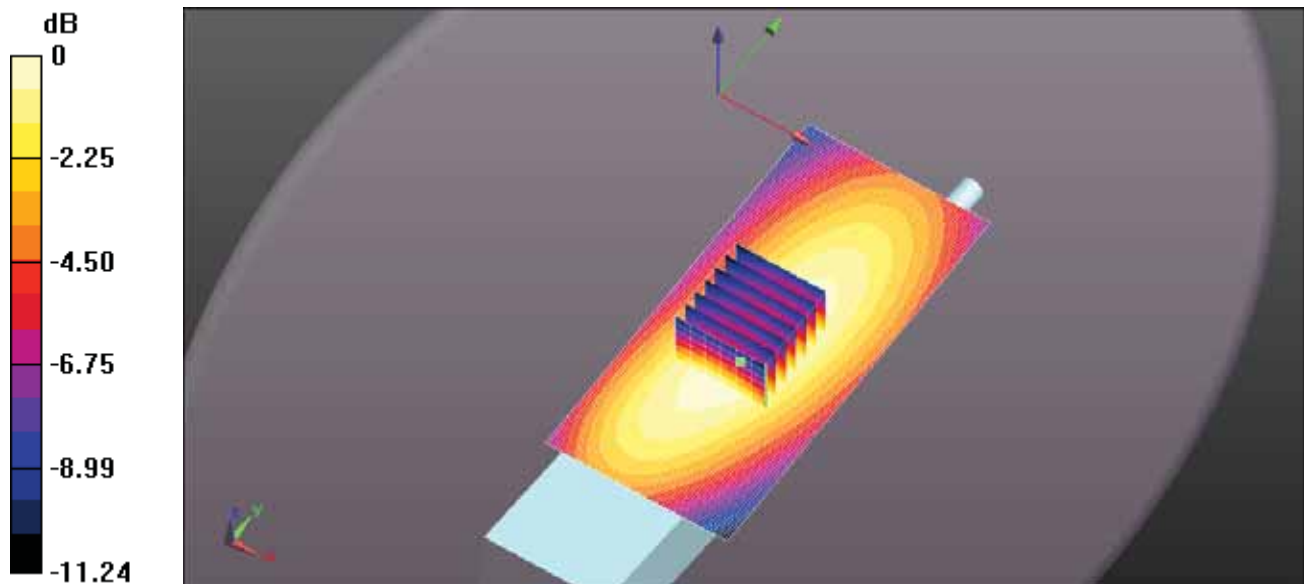
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.90 V/m ; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 2.98 W/kg

SAR(1 g) = 2.24 W/kg ; SAR(10 g) = 1.66 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.50 W/kg



0 dB = 3.04 W/kg = 4.82 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 165mm 400MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 400 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 400$ MHz; $\sigma = 0.844$ S/m; $\epsilon_r = 58.438$; $\rho = 1000$ kg/m³; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 8.89 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

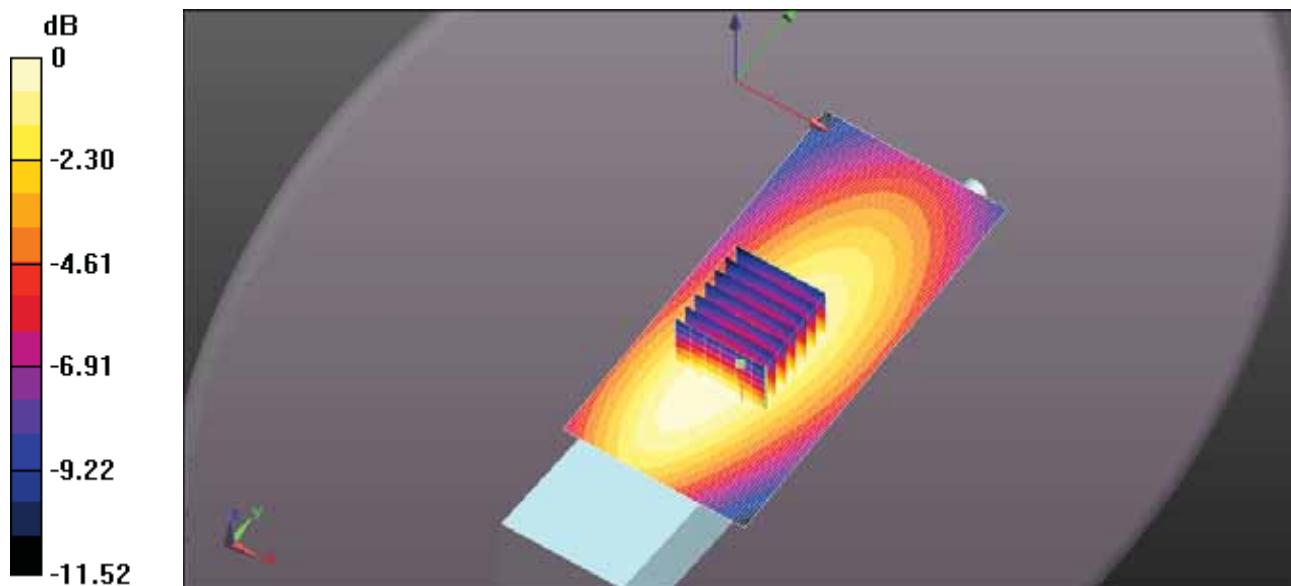
(7x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 97.32 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 8.71 W/kg

SAR(1 g) = 6.64 W/kg; SAR(10 g) = 4.96 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 7.35 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 165mm 425MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 425 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 425 \text{ MHz}$; $\sigma = 0.866 \text{ S/m}$; $\epsilon_r = 58.005$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 7.03 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

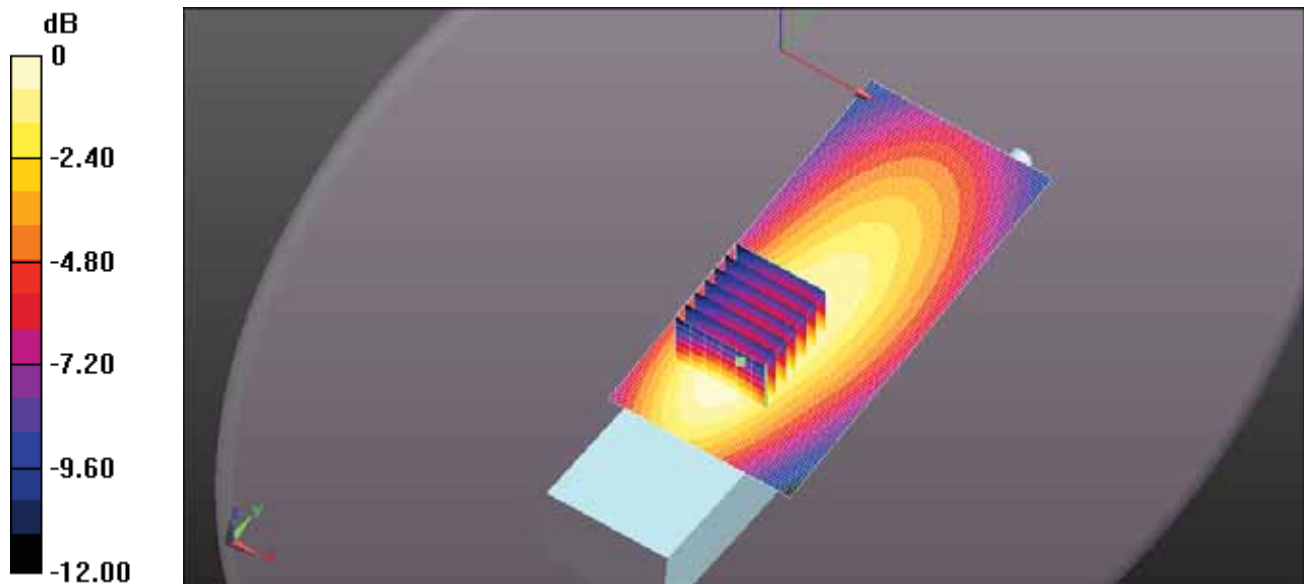
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 80.97 V/m ; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 6.84 W/kg

SAR(1 g) = 5.19 W/kg ; SAR(10 g) = 3.88 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.78 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 165mm 455MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 455 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 455 \text{ MHz}$; $\sigma = 0.911 \text{ S/m}$; $\epsilon_r = 57.258$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 4.56 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

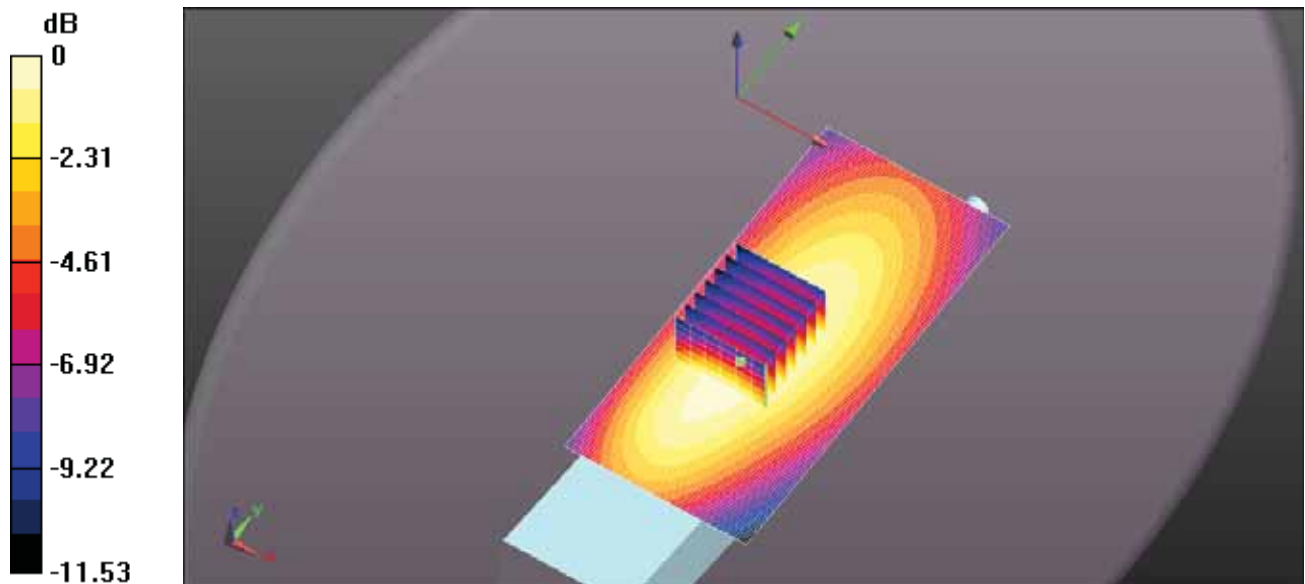
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 67.75 V/m ; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 4.43 W/kg

SAR(1 g) = 3.35 W/kg ; SAR(10 g) = 2.48 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.69 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 156mm 395MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 395 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 395 \text{ MHz}$; $\sigma = 0.843 \text{ S/m}$; $\epsilon_r = 58.448$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 10.4 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

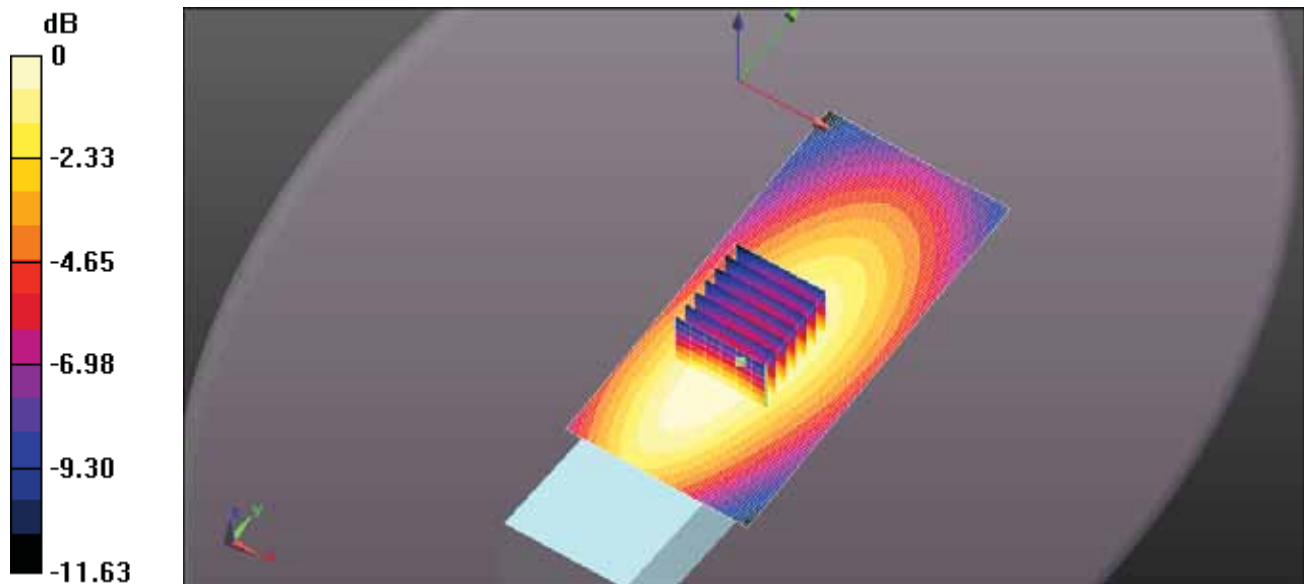
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 103.6 V/m ; Power Drift = -0.41 dB

Peak SAR (extrapolated) = 9.68 W/kg

SAR(1 g) = 7.39 W/kg ; SAR(10 g) = 5.55 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 8.20 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 156mm 420MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 420 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 420 \text{ MHz}$; $\sigma = 0.859 \text{ S/m}$; $\epsilon_r = 58.135$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 9.58 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

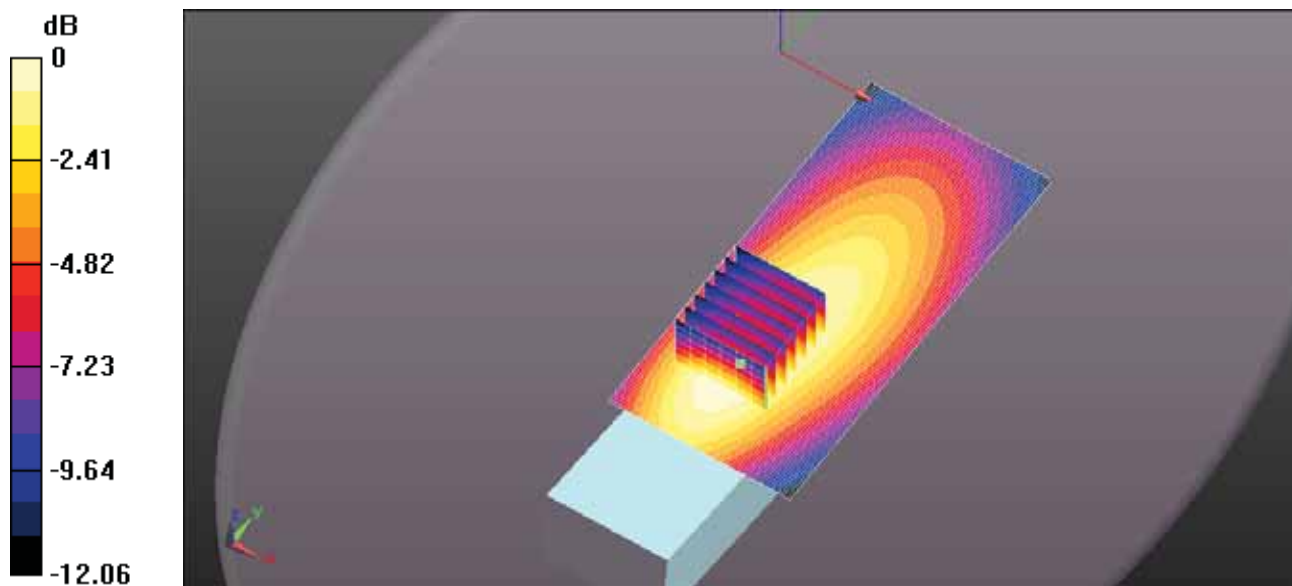
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 92.72 V/m ; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 9.20 W/kg

SAR(1 g) = 6.99 W/kg ; SAR(10 g) = 5.23 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 7.74 W/kg



0 dB = 9.58 W/kg = 9.81 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 156mm 455MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 455 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 455 \text{ MHz}$; $\sigma = 0.911 \text{ S/m}$; $\epsilon_r = 57.258$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.19 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

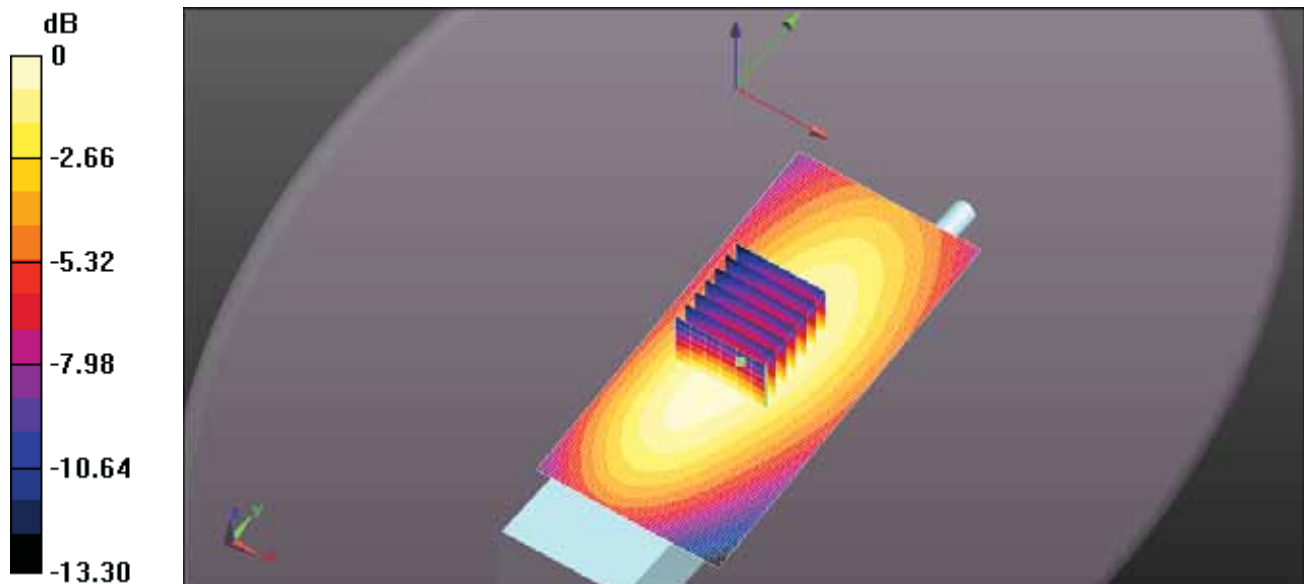
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 79.54 V/m ; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 6.02 W/kg

SAR(1 g) = 4.56 W/kg ; SAR(10 g) = 3.39 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.05 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 148mm 380MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 380 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 380 \text{ MHz}$; $\sigma = 0.844 \text{ S/m}$; $\epsilon_r = 58.451$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 7.72 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

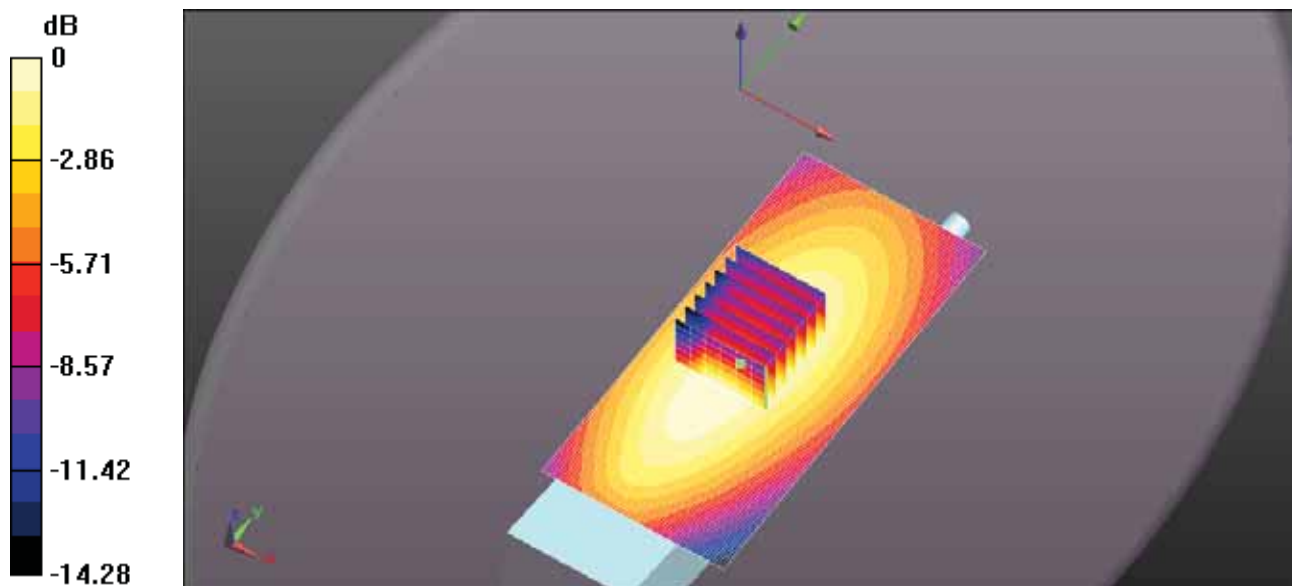
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 88.91 V/m ; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 7.53 W/kg

SAR(1 g) = 5.74 W/kg ; SAR(10 g) = 4.31 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.32 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 148mm 410MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 410 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 410 \text{ MHz}$; $\sigma = 0.85 \text{ S/m}$; $\epsilon_r = 58.353$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 9.80 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

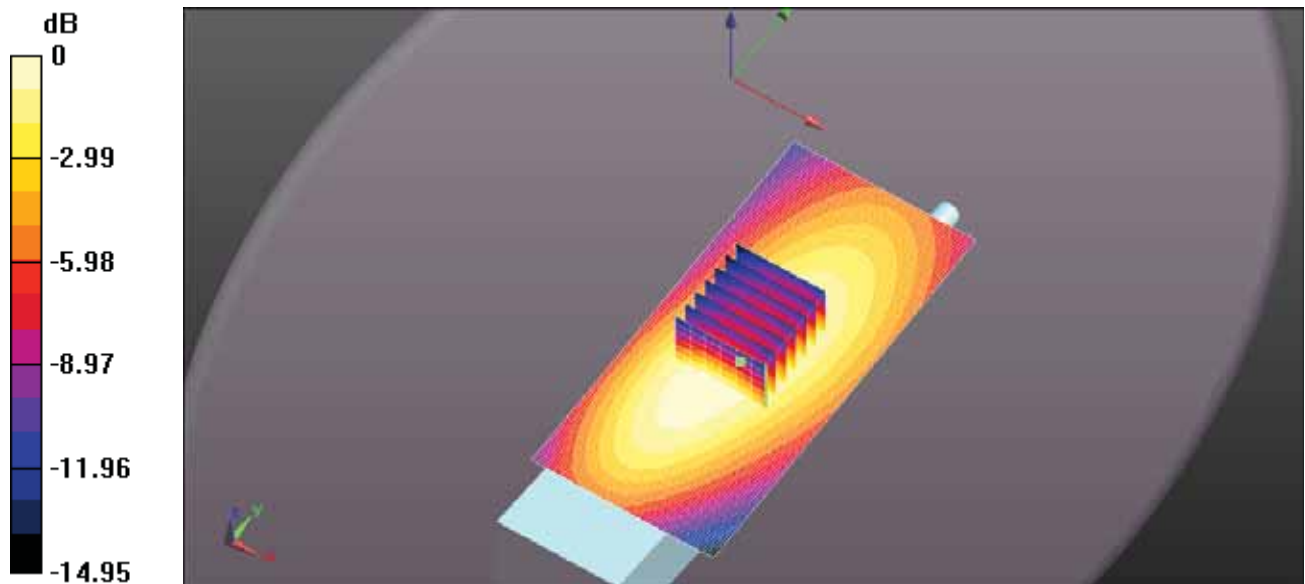
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 100.1 V/m ; Power Drift = -0.42 dB

Peak SAR (extrapolated) = 9.19 W/kg

SAR(1 g) = 6.99 W/kg ; SAR(10 g) = 5.2 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 7.76 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 148mm 440MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 440 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 440 \text{ MHz}$; $\sigma = 0.888 \text{ S/m}$; $\epsilon_r = 57.569$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 7.35 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

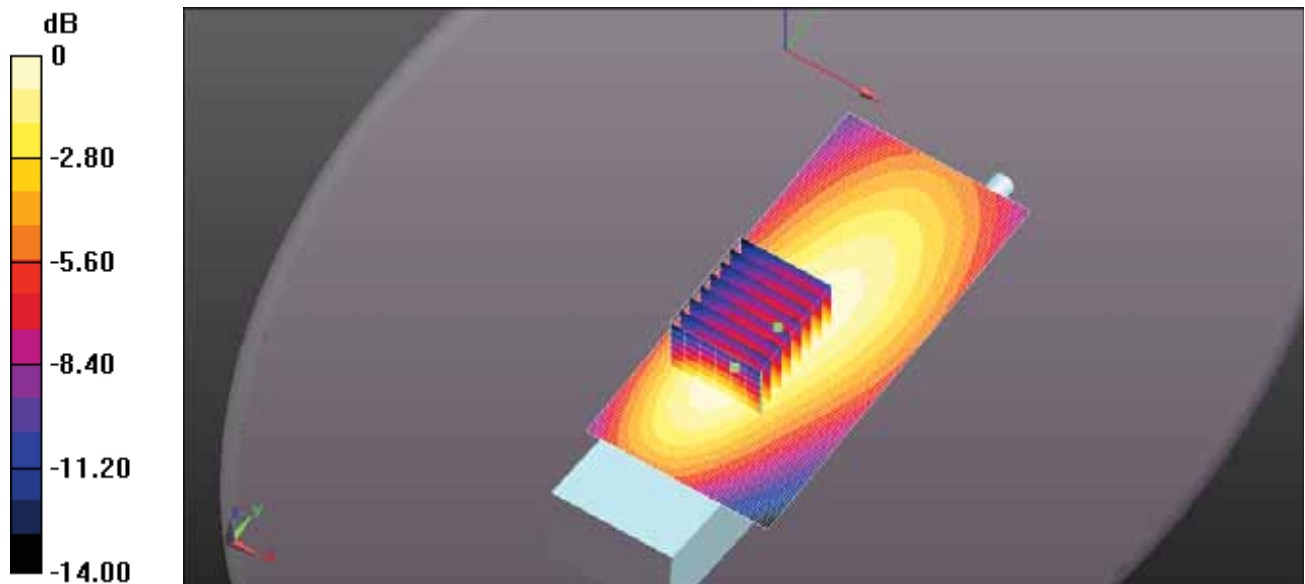
(7x8x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 84.53 V/m ; Power Drift = -0.30 dB

Peak SAR (extrapolated) = 7.01 W/kg

SAR(1 g) = 5.31 W/kg ; SAR(10 g) = 3.95 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.89 W/kg



0 dB = 7.35 W/kg = 8.66 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 148mm 470MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 470 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.929 \text{ S/m}$; $\epsilon_r = 56.979$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 6.92 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

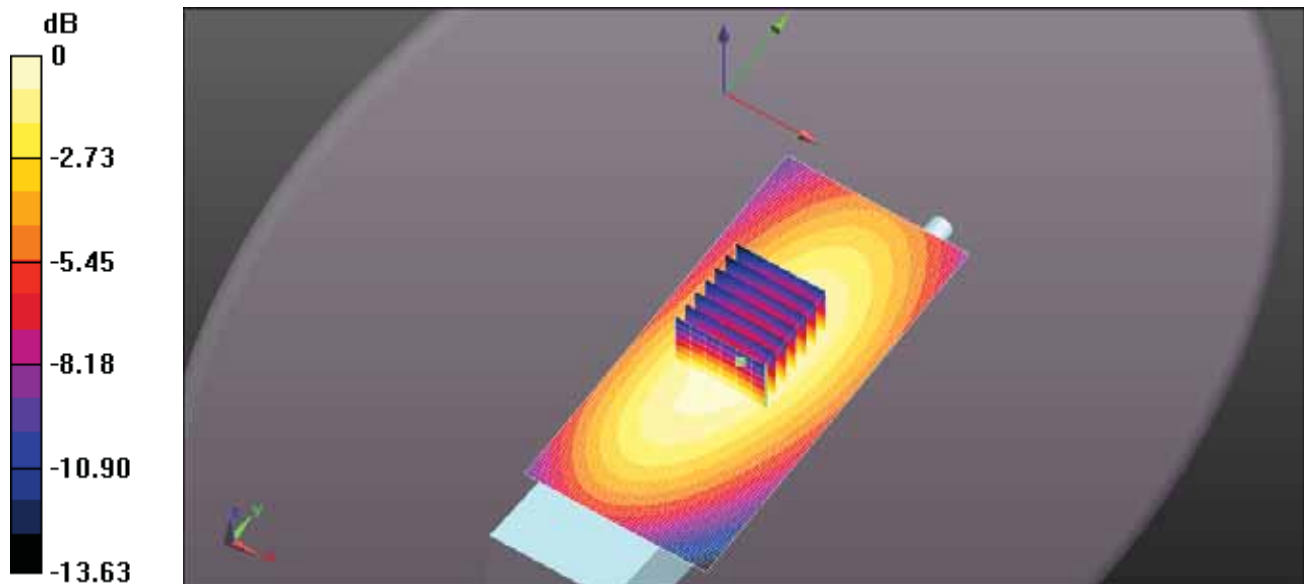
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 83.58 V/m ; Power Drift = -0.21 dB

Peak SAR (extrapolated) = 6.55 W/kg

SAR(1 g) = 4.96 W/kg ; SAR(10 g) = 3.69 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.51 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 142mm 380MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 380 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 380 \text{ MHz}$; $\sigma = 0.844 \text{ S/m}$; $\epsilon_r = 58.451$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 7.59 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

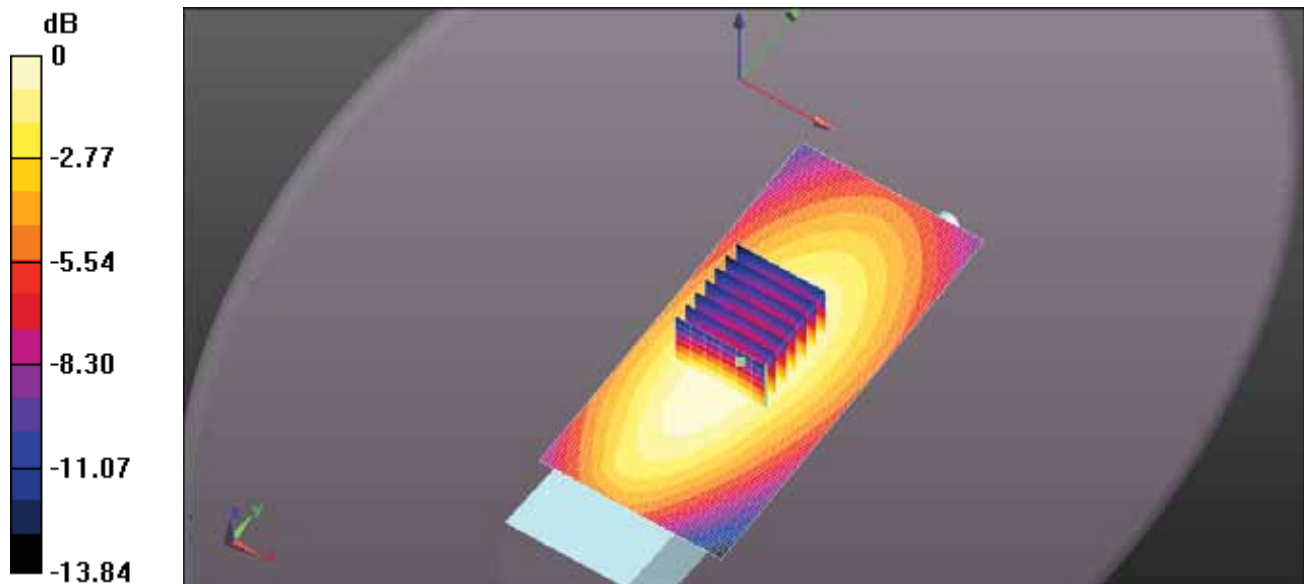
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 88.93 V/m ; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 7.39 W/kg

SAR(1 g) = 5.64 W/kg ; SAR(10 g) = 4.23 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.26 W/kg



Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 142mm 395MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 395 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 395 \text{ MHz}$; $\sigma = 0.843 \text{ S/m}$; $\epsilon_r = 58.448$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 9.70 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

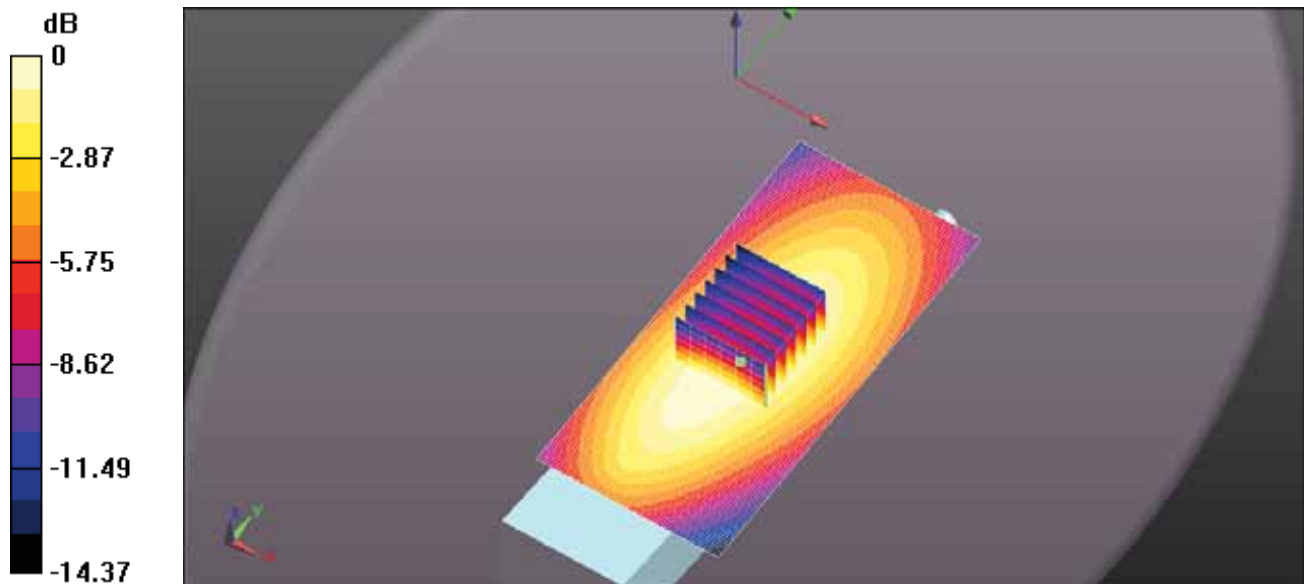
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 98.85 V/m ; Power Drift = -0.53 dB

Peak SAR (extrapolated) = 8.78 W/kg

SAR(1 g) = 6.63 W/kg ; SAR(10 g) = 4.93 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 7.38 W/kg



0 dB = 9.70 W/kg = 9.87 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 142mm 425MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 425 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 425 \text{ MHz}$; $\sigma = 0.866 \text{ S/m}$; $\epsilon_r = 58.005$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 10.3 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

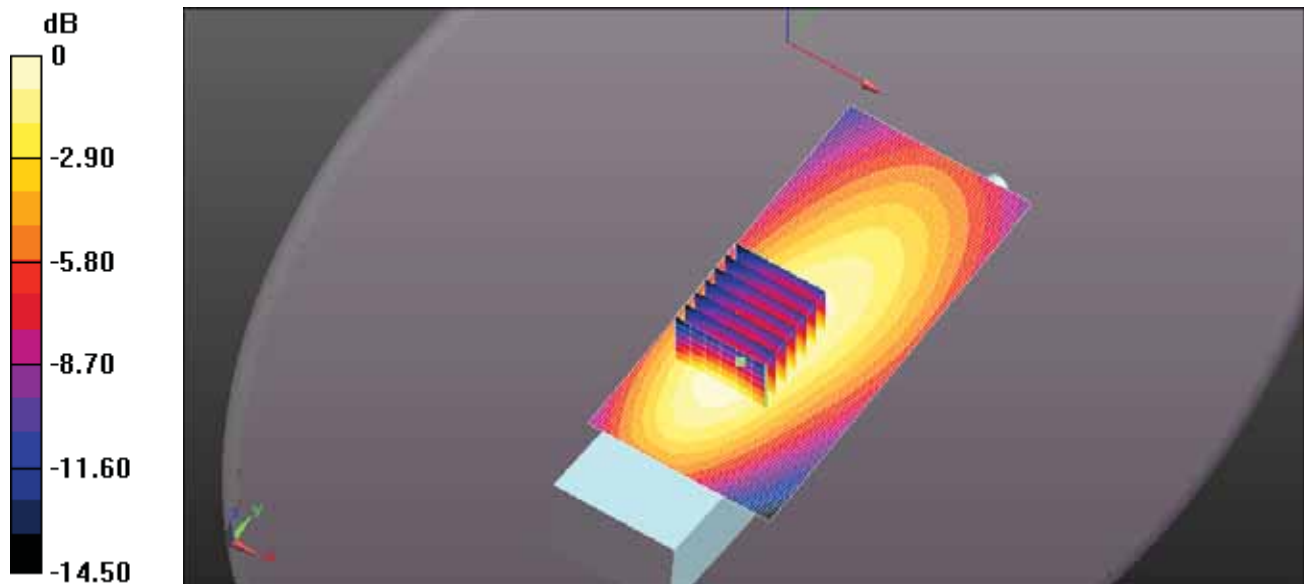
(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 93.44 V/m ; Power Drift = -0.23 dB

Peak SAR (extrapolated) = 9.48 W/kg

SAR(1 g) = 7.16 W/kg ; SAR(10 g) = 5.32 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 7.97 W/kg



0 dB = 10.3 W/kg = 10.12 dBW/kg

Test Laboratory: Ultratech Group of Labs

File Name: [ICOM-454Q FA-S76UC 142mm 460MHz.da52:0](#)

DUT: IC-F7020T; Type: UHF Transceiver; Serial: 00000203

Communication System: UID 0, CW (0); Frequency: 460 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 460 \text{ MHz}$; $\sigma = 0.918 \text{ S/m}$; $\epsilon_r = 57.119$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.51, 10.51, 10.51); Calibrated: 3/20/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 8/22/2016
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Area Scan (61x131x1):

Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 7.62 W/kg

Configuration_Body_IC-F7020T/Body Back, P=5W, d=0mm/Zoom Scan (5x5x7)

(7x7x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 87.34 V/m ; Power Drift = -0.22 dB

Peak SAR (extrapolated) = 7.32 W/kg

SAR(1 g) = 5.54 W/kg ; SAR(10 g) = 4.12 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.11 W/kg

