

APPENDIX 1

SAR Measurement Data

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EXHIBIT 1. PRESCAN MEASUREMENT SUMMARY

Battery BP-245H 2250mAh HM-167	Antenna	Power (W)	CH	CH. Freq	BODY SAR1g (W/Kg)	BODY SAR10g (W/Kg)	Power Drift (dB)
				(MHz)			
MB-103	FA-S64V	5.70	01 A	156.05	0.543	0.353	0.09
MB-86		5.70	01 A	156.05	0.4	0.305	-0.33

FILE NAME: [ICOM-521Q BODY PRESCAN MB-103 BP-245H 156.050MHZ.DA52:0](#)

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW; Frequency: 156.05 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 156.05$ MHz; $\sigma = 0.783$ S/m; $\epsilon_r = 61.661$; $\rho = 1000$ 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: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.835 W/kg

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Zoom Scan (5x5x7)

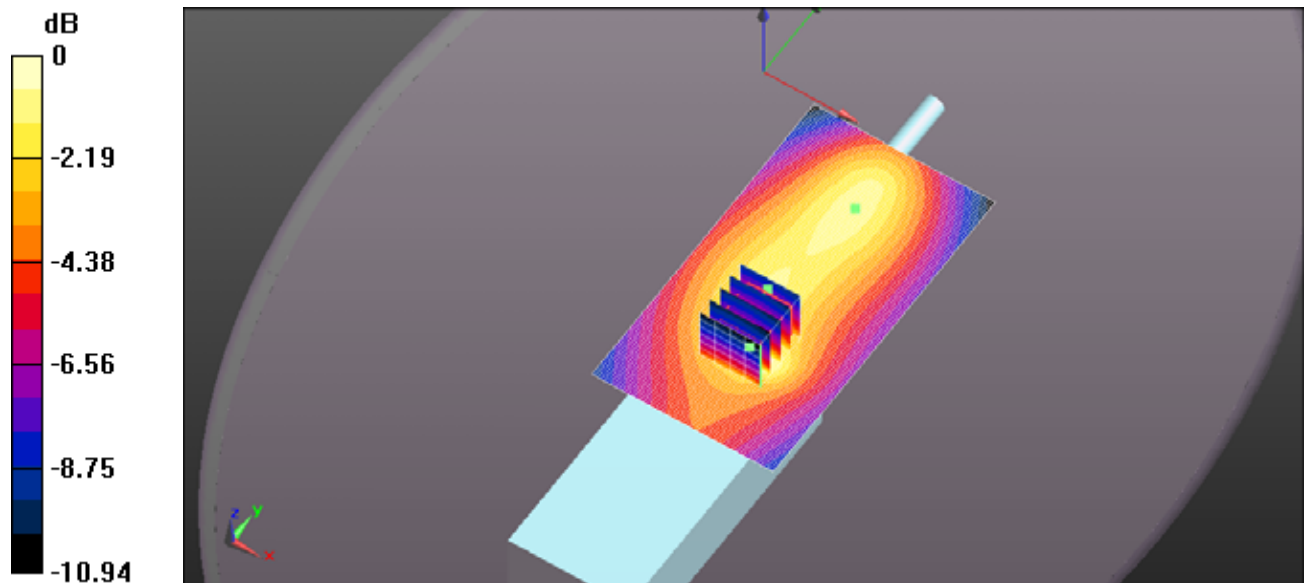
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 27.79 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.543 W/kg; SAR(10 g) = 0.353 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.834 W/kg



0 dB = 0.835 W/kg = -0.78 dBW/kg

FILE NAME: ICOM-521Q BODY PRESCAN MB-103 BP-245H 156.050MHZ.DA52:0

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW; Frequency: 156.05 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 156.05$ MHz; $\sigma = 0.783$ S/m; $\epsilon_r = 61.661$; $\rho = 1000$ 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: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.835 W/kg

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Zoom Scan (5x5x7)

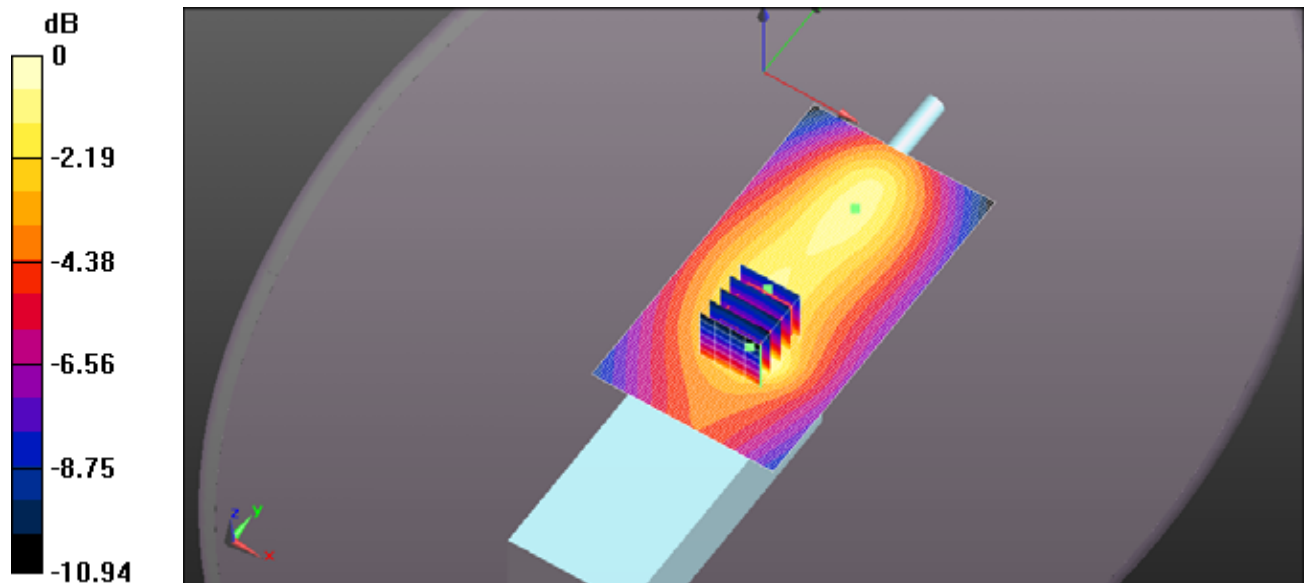
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 27.79 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.543 W/kg; SAR(10 g) = 0.353 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.834 W/kg



0 dB = 0.835 W/kg = -0.78 dBW/kg

EXHIBIT 2. HEAD SAR MEASUREMENTS

Antenna	Power (W)	CH	CH. Freq	HEAD SAR1g (W/Kg)	HEAD SAR10g (W/Kg)	Power Drift (dB)
				BP-245H	BP-245H	
			(MHz)	2250mAh	2250mAh	
FA-S59V	5.70	01A	156.05	0.709	0.544	-1.16
	5.66	74	156.725	**	**	**
	5.60	88	157.425	0.629	0.483	-1.64
FA-S64V	5.70	01A	156.05	1.02	0.776	-1.41
	5.66	74	156.725	**	**	**
	5.60	88	157.425	0.895	0.683	-1.63

FILE NAME: [ICOM-521Q HEAD FA-S59V 156.050MHZ.DA52:0](#)

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW (0); Frequency: 156.05 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 156.05$ MHz; $\sigma = 0.73$ S/m; $\epsilon_r = 52.862$; $\rho = 1000$ kg/m³ ;
Phantom section: Flat Section ; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.55, 10.55, 10.55); Calibrated: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Head_IC-M73/Head Front, P=6W, d=25mm/Area Scan (61x141x1):

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

Maximum value of SAR (interpolated) = 0.943 W/kg

Configuration_Head_IC-M73/Head Front, P=6W, d=25mm/Zoom Scan (5x5x7)

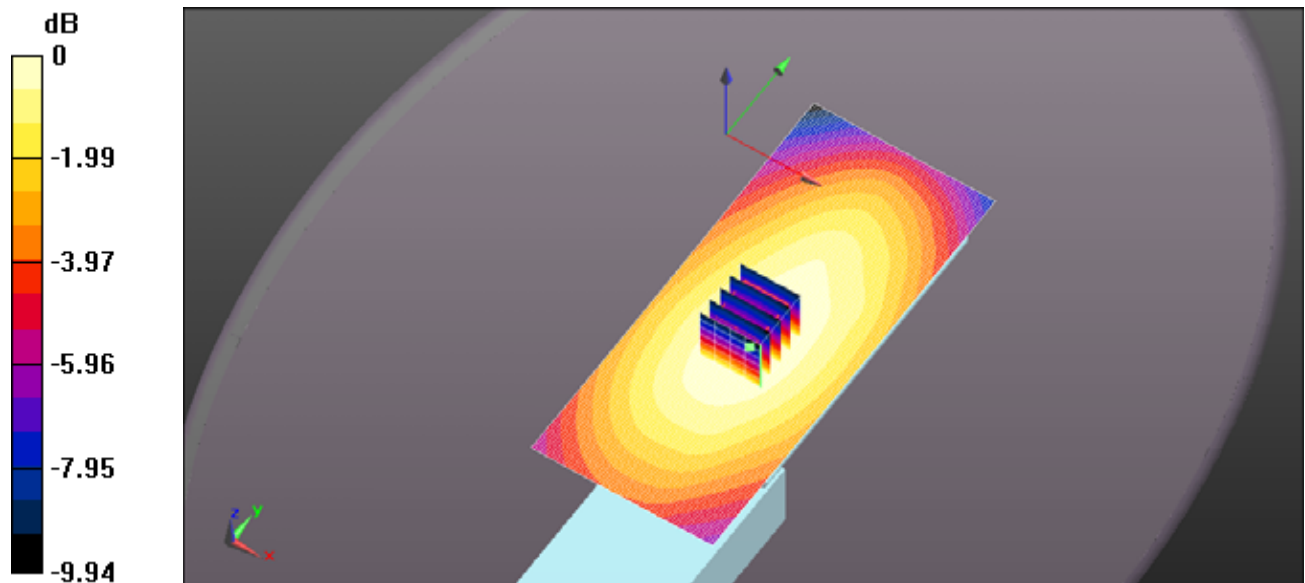
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 38.62 V/m; Power Drift = -1.16 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.709 W/kg; SAR(10 g) = 0.544 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.918 W/kg



0 dB = 0.943 W/kg = -0.25 dBW/kg

FILE NAME: [ICOM-521Q HEAD FA-S59V 157.425MHZ.DA52:0](#)

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW (0); Frequency: 157.425 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 158 \text{ MHz}$; $\sigma = 0.732 \text{ S/m}$; $\epsilon_r = 52.833$; $\rho = 1000 \text{ kg/m}^3$; Phantom section:
Flat Section; Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.55, 10.55, 10.55); Calibrated: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASYS 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Head_IC-M73/Head Front, P=6W, d=25mm/Area Scan (61x141x1):

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

Maximum value of SAR (interpolated) = 0.875 W/kg

Configuration_Head_IC-M73/Head Front, P=6W, d=25mm/Zoom Scan (5x5x7)

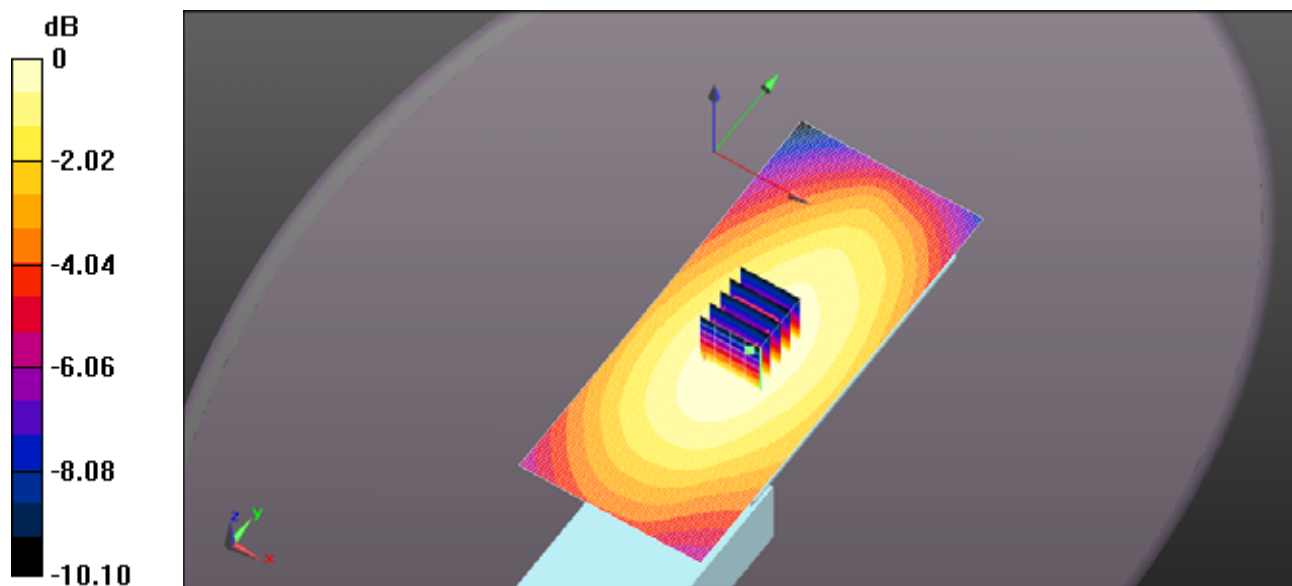
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 39.03 V/m ; Power Drift = -1.64 dB

Peak SAR (extrapolated) = 0.962 W/kg

SAR(1 g) = 0.629 W/kg ; SAR(10 g) = 0.483 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.810 W/kg



0 dB = 0.875 W/kg = -0.58 dBW/kg

FILE NAME: ICOM-521Q HEAD FA-S64V 156.050MHZ.DA52:0

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW (0); Frequency: 156.05 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 156.05$ MHz; $\sigma = 0.73$ S/m; $\epsilon_r = 52.862$; $\rho = 1000$ kg/m³ ;
Phantom section: Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.55, 10.55, 10.55); Calibrated: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Head_IC-M73/Head Front, P=6W, d=25mm/Area Scan (81x121x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.35 W/kg

Configuration_Head_IC-M73/Head Front, P=6W, d=25mm/Zoom Scan (5x5x7)

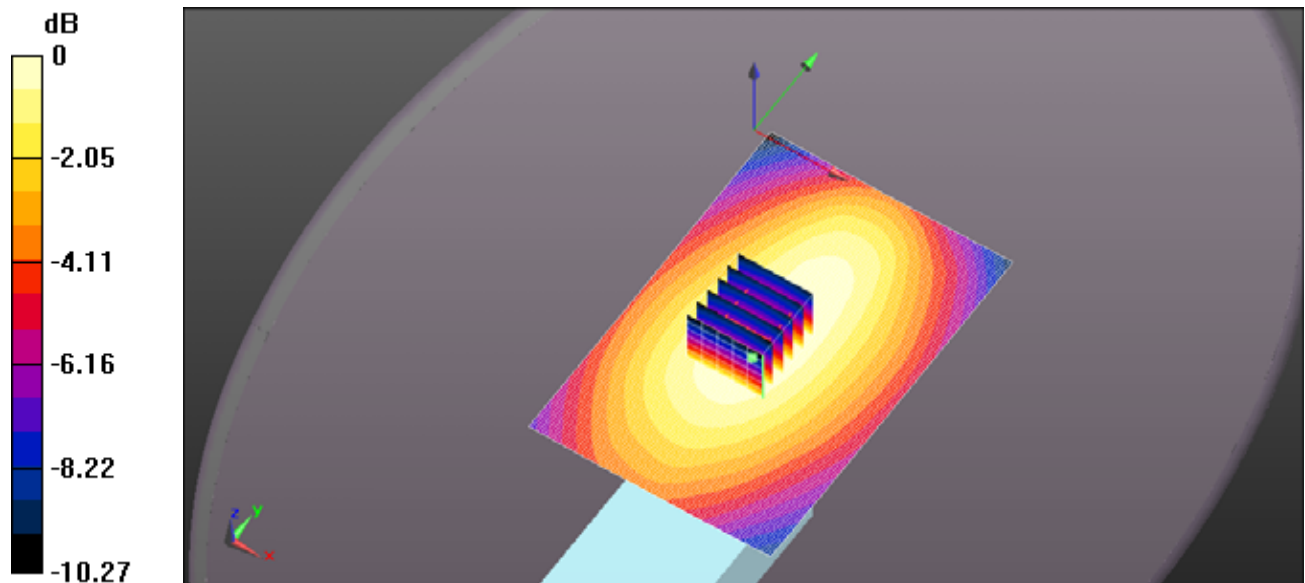
(6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 48.55 V/m; Power Drift = -1.41 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.776 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.32 W/kg



0 dB = 1.35 W/kg = 1.29 dBW/kg

FILE NAME: [ICOM-521Q HEAD FA-S64V 157.425MHZ.DA52:0](#)

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW (0); Frequency: 157.425 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 158 \text{ MHz}$; $\sigma = 0.732 \text{ S/m}$; $\epsilon_r = 52.833$; $\rho = 1000 \text{ kg/m}^3$; Phantom section:
Flat Section ; Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3673; ConvF(10.55, 10.55, 10.55); Calibrated: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Head_IC-M73/Head Front, P=6W, d=25mm/Area Scan (81x121x1):

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

Maximum value of SAR (interpolated) = 1.29 W/kg

Configuration_Head_IC-M73/Head Front, P=6W, d=25mm/Zoom Scan (5x5x7)

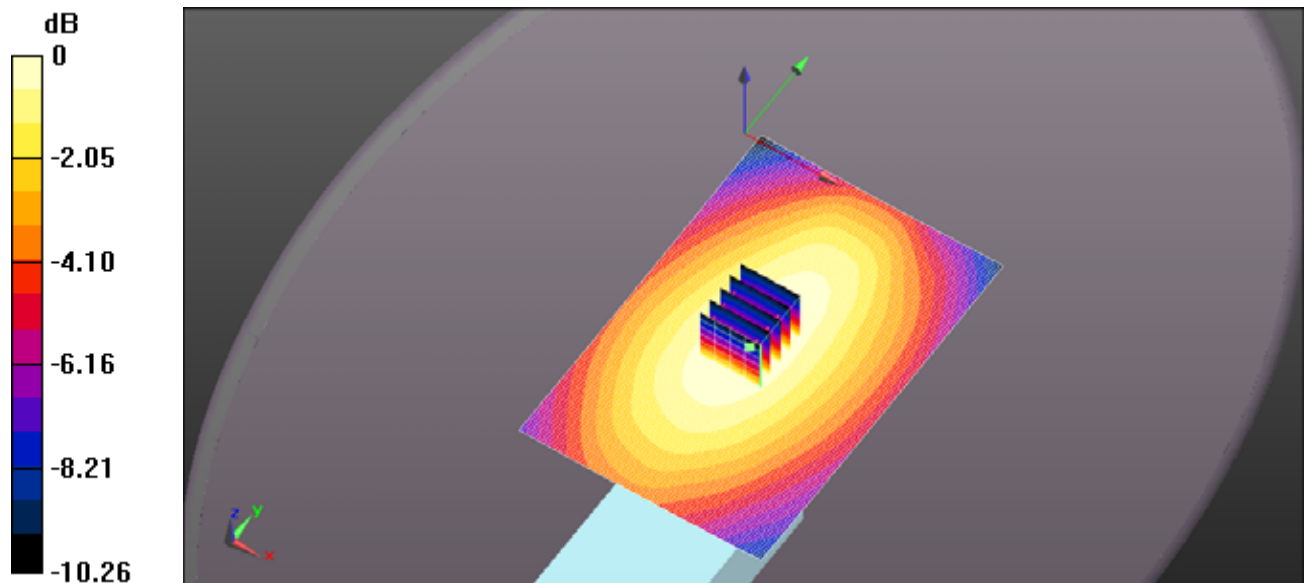
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 45.30 V/m ; Power Drift = -1.63 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.895 W/kg ; SAR(10 g) = 0.683 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.29 W/kg = 1.10 dBW/kg

EXHIBIT 3. BODY SAR MEASUREMENTS

Antenna	Power (W)	CH	CH. Freq	Body SAR1g (W/Kg)	Body SAR10g (W/Kg)	Power Drift (dB)
				MB-103	MB-103	
			(MHz)	BP-245H	BP-245H	
FA-S59V	5.70	01A	156.05	0.541	0.356	-0.25
	5.66	74	156.725	**	**	**
	5.60	88	157.425	0.487	0.322	-0.38
FA-S64V	5.70	01A	156.05	0.538	0.352	-0.27
	5.66	74	156.725	**	**	**
	5.60	88	157.425	0.481	0.314	-0.36

FILE NAME: ICOM-521Q BODY MB103 FA-S59V 156.050MHZ.DA52:0

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW; Frequency: 156.05 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 156.05$ MHz; $\sigma = 0.783$ S/m; $\epsilon_r = 61.661$; $\rho = 1000$ 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: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.895 W/kg

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Zoom Scan (5x5x7)

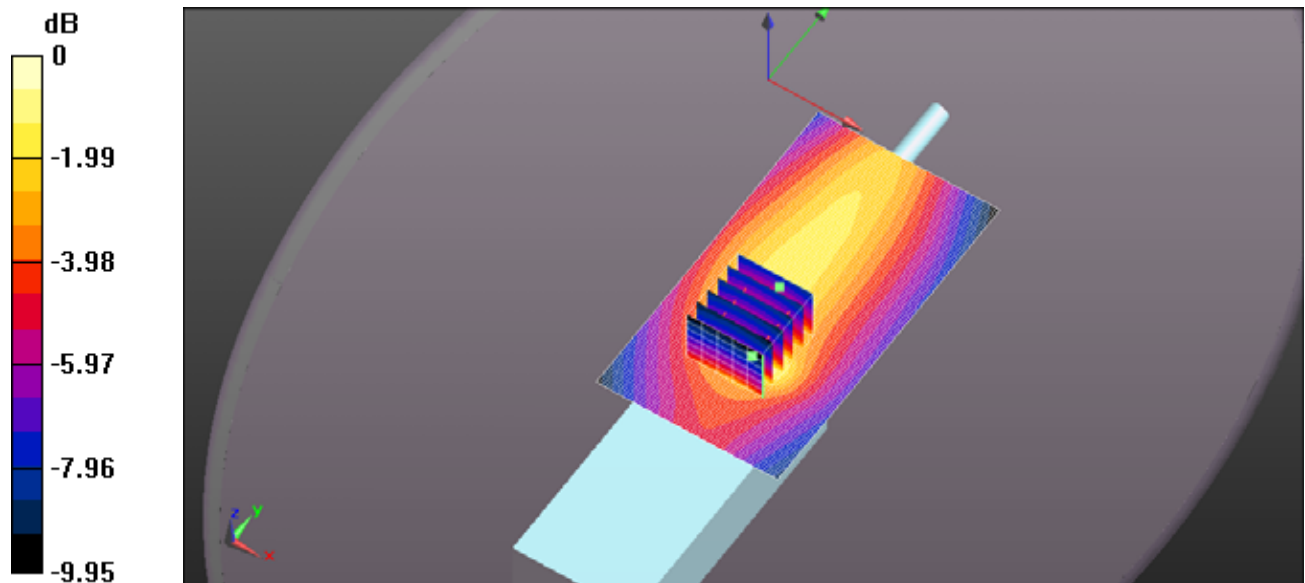
(6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 29.02 V/m; Power Drift = -0.25 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.541 W/kg; SAR(10 g) = 0.356 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.868 W/kg



0 dB = 0.895 W/kg = -0.48 dBW/kg

FILE NAME: ICOM-521Q BODY MB103 FA-S59V 157.425MHZ.DA52:0

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW; Frequency: 157.425 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 158 \text{ MHz}$; $\sigma = 0.784 \text{ S/m}$; $\epsilon_r = 61.67$; $\rho = 1000 \text{ kg/m}^3$; 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: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Area Scan (61x111x1):

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

Maximum value of SAR (interpolated) = 0.706 W/kg

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Zoom Scan (5x5x7)

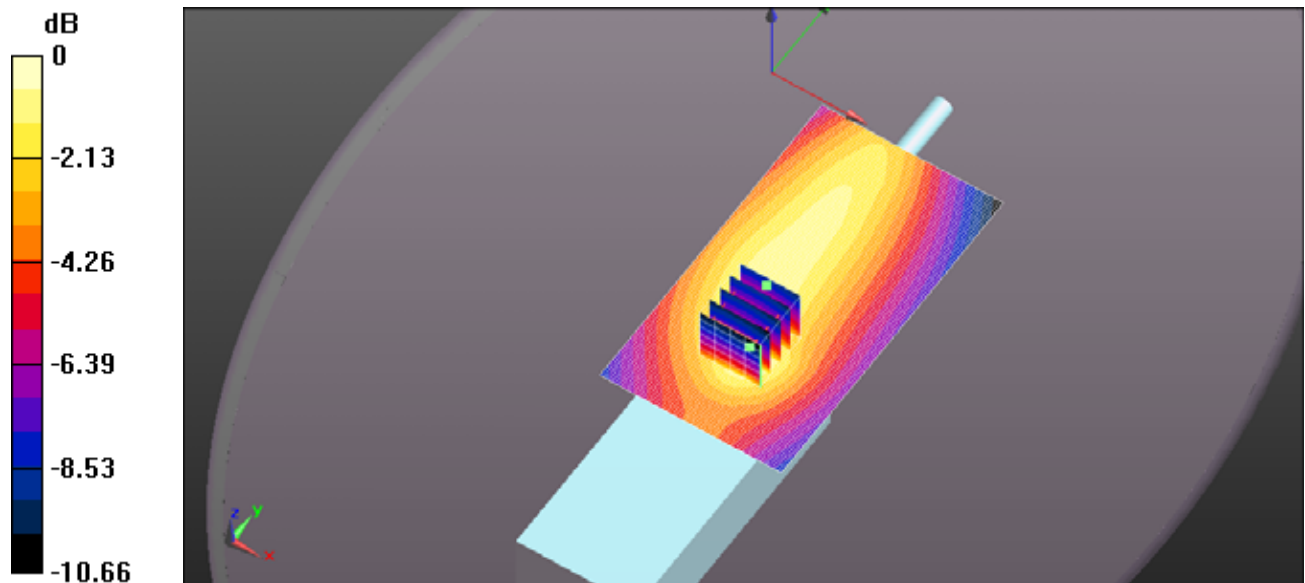
(5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.93 V/m ; Power Drift = -0.38 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.487 W/kg ; SAR(10 g) = 0.322 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.770 W/kg



$0 \text{ dB} = 0.706 \text{ W/kg} = -1.51 \text{ dBW/kg}$

FILE NAME: ICOM-521Q BODY MB103 FA-S64V 157.425MHZ.DA52:0

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW; Frequency: 157.425 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 158 \text{ MHz}$; $\sigma = 0.784 \text{ S/m}$; $\epsilon_r = 61.67$; $\rho = 1000 \text{ kg/m}^3$; 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: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.777 W/kg

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Zoom Scan (5x5x7)

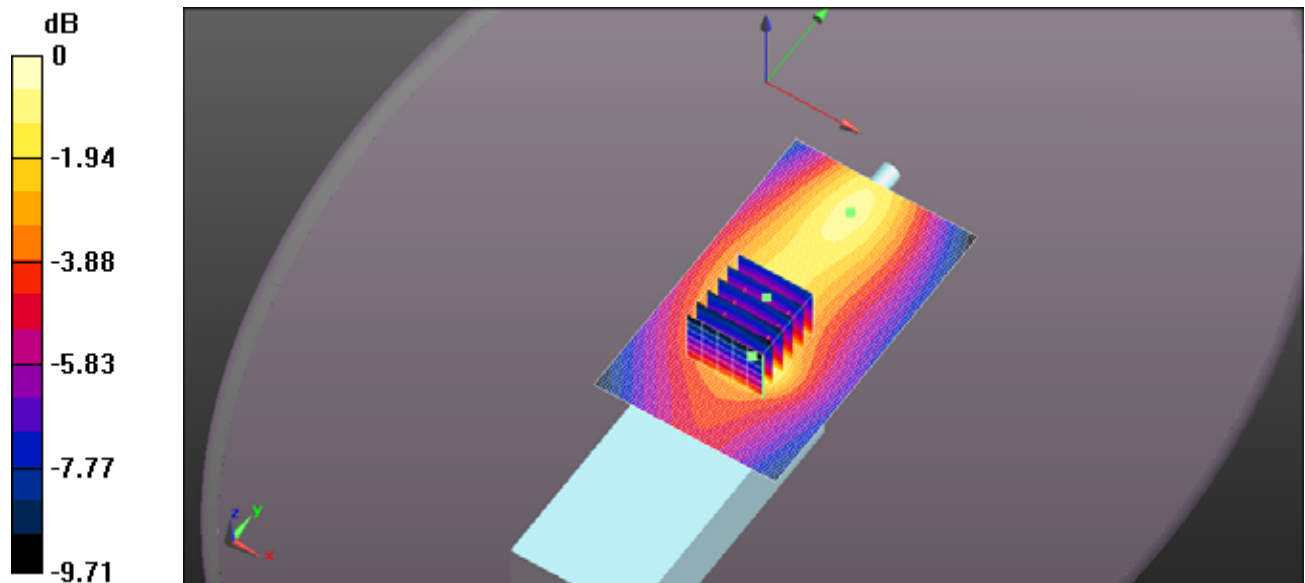
(6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.76 V/m ; Power Drift = -0.36 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.481 W/kg ; SAR(10 g) = 0.314 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.766 W/kg



0 dB = 0.777 W/kg = -1.09 dBW/kg

FILE NAME: [ICOM-521Q BODY MB103 FA-S64V 156.050MHZ.DA52:0](#)

DUT: IC-M73; Type: VHF Marine Transceiver; Serial: 00000012

Communication System: UID 0, CW; Frequency: 156.05 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 156.05$ MHz; $\sigma = 0.783$ S/m; $\epsilon_r = 61.661$; $\rho = 1000$ 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: 8/19/2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn874; Calibrated: 11/19/2019
- Phantom: ELI 4.0; Type: QD OVA 001 BB; Serial: 1057
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Area Scan (61x101x1):

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

Maximum value of SAR (interpolated) = 0.827 W/kg

Configuration_Body_IC-M73/Front to Face, P=6W, d=0mm/Zoom Scan (5x5x7)

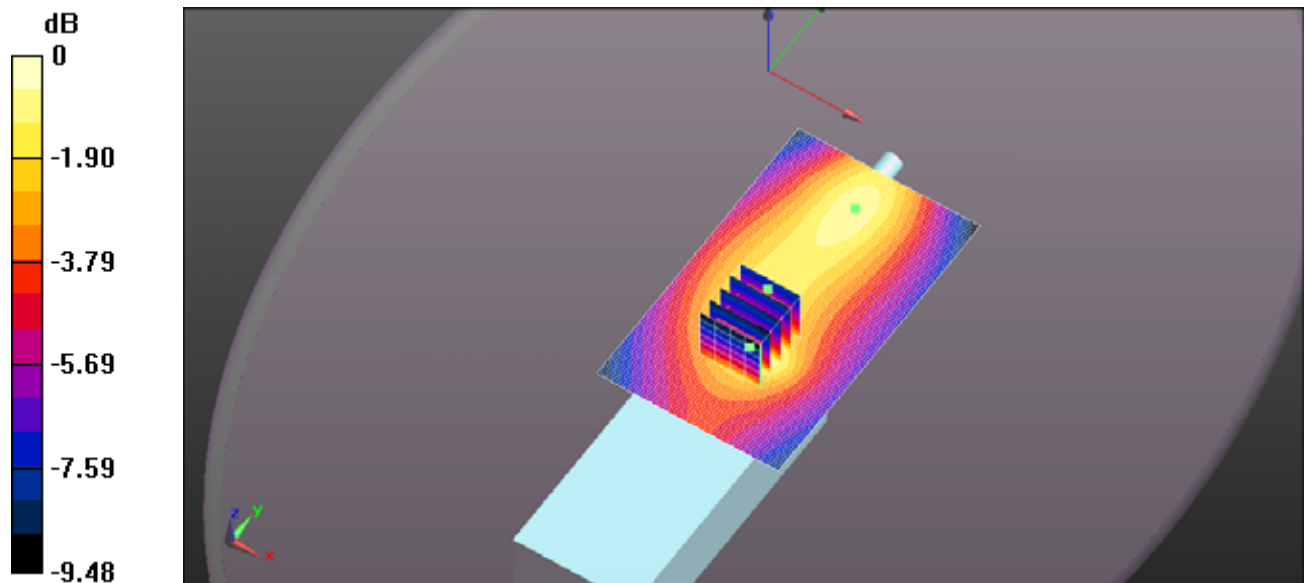
(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 28.39 V/m; Power Drift = -0.27 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.538 W/kg; SAR(10 g) = 0.352 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.820 W/kg



0 dB = 0.827 W/kg = -0.83 dBW/kg