

Date(s) of Evaluation	ı
May 30-Jun7, 2013	

Test Report Issue Date Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)

Specific Absorption Rate

Rev. 1.0 (1st Release) RF Exposure Category Occupational (Controlled)



Name Address ISO 17025 Name Address	21-364 L A2LA Te	ougheed										
ISO 17025 Name	A2LA Te		Road K				Name CELLTECH LABS INC.					
Name			dress 21-364 Lougheed Road, Kelowna, B.C. V1X 7R8 Canada									
	HARRIS	st Lab Ce	rtificate	No. 2	470.01							
Address	Name HARRIS CORPORATION											
	Address 221 Jefferson Ridge Parkway, Lynchburg, VA 24501 U.S.A.											
FCC	47 CFR	§2.1093										
IC	Health Canada Safety Code 6											
FCC	OET Bul	letin 65, S	ирр. С	KD	B 4474	98 D01	v05	KDB 643	646 D01v01r01			
IC	RSS-102	2 Issue 4	IEE	E	1528-2	.003		IEC	62209-2:2010			
FCC	Licensed	d Non-Bro	adcast 1	ransı	mitter F	Held to F	ace (	TNF) - FO	CC Part 90			
IC	Land Mo	bile Radio	Transn	nitter/	Receiv	er (27.4	11-960	) MHz) - F	RSS-119			
FCC ID:	OWDTR	-0109-E			I	<b>C</b> : 3	3636B	-0109				
May 28, 2013												
May 30, 31, Jun	y 30, 31, June 3, 4 ,5 ,6 & 7, 2013											
Portable UHF B	e UHF Band Digital Push-To-Talk (PTT) Radio Transceiver with Bluetooth					oth						
XG-25P UHF-L	System	Model: D	PXG-PI	-U1B		P/N: 1	4011-	0030-01	DTMF Keypad			
XG-25P UHF-L	F-L Scan Model: DPXG-PFU1B P/N:			P/N: 1	: 14011-0030-02 Limited Keypad							
XG-25P System	- S/N: 25	5 (identica	prototy	pe)	XG-2	5P Scar	n - S/N	N: 50 (ide	ntical prototype)			
Hardware	n/a				Firm	ware	P02	A10				
FCC 406.1 – 470.0 MHz												
IC 406.1 – 430.0; 450.0 – 470.0 MHz												
5.0 W (5.3 W m	ax.)											
Bluetooth (Class	s 2) O	utput Pow	er: 1.0 r	nW			F	req. Ran	ge: 2402-2480 MH			
See manufactur	er's acce	ssory listir	g (Sect	ion 5.	.0)							
See manufactur	er's acce	ssory listir	g (Sect	ion 5.	.0)							
See manufactur	er's acce	ssory listir	g (Sect	ion 5.	.0)							
See manufactur	er's acce	ssory listir	g (Sect	ion 5.	.0)							
Face-held (FCC)	1.94 V	V/kg 1g	50%	PTT	duty fa	ctor	Occup	oational /	Controlled Exposu			
Face-Held (IC)	2.10 V	<b>V/kg</b> 1g	50%	PTT	duty fa	ctor	Occup	oational /	Controlled Exposu			
Body-worn	5.13 V	<b>V/kg</b> 1g	50%	PTT	duty fa	ctor	Occup	oational /	Controlled Exposu			
Head/Body	8.0 W	//kg 1g	50%	PTT	duty fa	ctor	Occup	oational /	Controlled Exposu			
N F X X X 5 E S S S F II	IC FCC IC Ay 28, 2013 Ay 30, 31, Jun Portable UHF B G-25P UHF-L G-25P System Hardware FCC IC 5.0 W (5.3 W m Bluetooth (Class Gee manufactur	IC Licensed Licensed Licensed Licensed Licensed OWDTR May 28, 2013 May 30, 31, June 3, 4,5 Portable UHF Band Digits (G-25P UHF-L System (G-25P System - S/N: 26 Hardware n/a FCC 406.1 - 4 Licensed Licen	IC Licensed Non-Broad IC Land Mobile Radio IC Land Mobile Radio IC OWDTR-0109-E May 28, 2013  May 30, 31, June 3, 4, 5, 6 & 7, 2013  Portable UHF Band Digital Push-To IC G-25P UHF-L System Model: DIC G-25P System - S/N: 25 (identical IC Hardware	IC Licensed Non-Broadcast T IC Land Mobile Radio Transm FCC ID: OWDTR-0109-E May 28, 2013 May 30, 31, June 3, 4, 5, 6 & 7, 2013 Portable UHF Band Digital Push-To-Talk (FCG-25P UHF-L System Model: DPXG-PFCG-25P System - S/N: 25 (identical prototy) Hardware n/a FCC 406.1 - 470.0 MHz IC 406.1 - 470.0 MHz IC 406.1 - 430.0; 450.0 - 470 See manufacturer's accessory listing (Section See manufac	IC Licensed Non-Broadcast Transiter/ IC Land Mobile Radio Transmitter/ FCC ID: OWDTR-0109-E  May 28, 2013  May 30, 31, June 3, 4, 5, 6 & 7, 2013  Portable UHF Band Digital Push-To-Talk (PTT)    (G-25P UHF-L System Model: DPXG-PFU1B    (G-25P System - S/N: 25 (identical prototype)    Hardware	IC RSS-102 Issue 4 IEEE 1528-2  FCC Licensed Non-Broadcast Transmitter F  IC Land Mobile Radio Transmitter/Receive FCC ID: OWDTR-0109-E IG  May 28, 2013  May 30, 31, June 3, 4, 5, 6 & 7, 2013  Portable UHF Band Digital Push-To-Talk (PTT) Radio To Caracteristic Scan Model: DPXG-PFU1B  (G-25P UHF-L Scan Model: DPXG-PFU1B  (G-25P System - S/N: 25 (identical prototype) XG-25P  Hardware n/a Firm  FCC 406.1 – 470.0 MHz  IC 406.1 – 470.0 MHz  IC 406.1 – 430.0; 450.0 – 470.0 MHz  Soluetooth (Class 2) Output Power: 1.0 mW  See manufacturer's accessory listing (Section 5.0)  See manufacturer's accessory listing (Section 5.0)  See manufacturer's accessory listing (Section 5.0)  Face-held (FCC) 1.94 W/kg 1g 50% PTT duty face-held (FCC) 1.94 W/kg 1g 50% PTT duty face-held (IC) 2.10 W/kg 1g 50% PTT duty face-held/Body 8.0 W/kg 1g 50% PTT duty face-	IC Licensed Non-Broadcast Transmitter Held to RIC Land Mobile Radio Transmitter/Receiver (27.4 FCC ID: OWDTR-0109-E IC: 3 May 28, 2013 May 30, 31, June 3, 4, 5, 6 & 7, 2013 Portable UHF Band Digital Push-To-Talk (PTT) Radio Transce (G-25P UHF-L System Model: DPXG-PFU1B P/N: 1 (G-25P UHF-L Scan Model: DPXG-PFU1B P/N: 1 (G-25P System - S/N: 25 (identical prototype) XG-25P Scal Hardware n/a Firmware  FCC 406.1 – 470.0 MHz IC 406.1 – 470.0 MHz IC 406.1 – 430.0; 450.0 – 470.0 MHz See manufacturer's accessory listing (Section 5.0) See manufacturer's accessory listing (Section 5.0) See manufacturer's accessory listing (Section 5.0) Face-held (FCC) 1.94 W/kg 1g 50% PTT duty factor Face-Held (IC) 2.10 W/kg 1g 50% PTT duty factor responsibility that this wireless portable device has demons	FCC Licensed Non-Broadcast Transmitter Held to Face (  IC Land Mobile Radio Transmitter/Receiver (27.41-960  FCC ID: OWDTR-0109-E IC: 3636B  May 30, 31, June 3, 4, 5, 6 & 7, 2013  Portable UHF Band Digital Push-To-Talk (PTT) Radio Transceiver was (G-25P UHF-L System Model: DPXG-PFU1B P/N: 14011-  (G-25P UHF-L Scan Model: DPXG-PFU1B P/N: 14011-  (G-25P System - S/N: 25 (identical prototype) XG-25P Scan - S/N  Hardware n/a Firmware P02  FCC 406.1 − 470.0 MHz  IC 406.1 − 470.0 MHz  IC 406.1 − 430.0; 450.0 − 470.0 MHz  See manufacturer's accessory listing (Section 5.0)  See manufacturer's accessory listing (Section 5.0)  See manufacturer's accessory listing (Section 5.0)  Face-held (FCC) 1.94 W/kg 1g 50% PTT duty factor Occup  Body-worn 5.13 W/kg 1g 50% PTT duty factor Occup  responsibility that this wireless portable device has demonstrated	IC			

65, Supplement C (Edition 01-01), Industry Canada RSS-102 Issue 4, IEEE Standard 1528-2003 and IEC International Standard 62209-2:2010. All measurements were performed in accordance with the SAR system manufacturer recommendations.

I attest to the accuracy of data. All measurements were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

This test report shall not be reproduced partially, or in full, without the prior written approval of Celltech Labs Inc.

The results and statements contained in this report pertain only to the device(s) evaluated.

**Test Report Approved By** 

Me S.M.

Mike Meaker

**Engineering Technologist** 

Celltech Labs Inc.

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:	3636B-0109		HARRIS
DUT Type:	/pe: Portable UHF Band PTT Radio Transceiver with Bluetooth				DUT Na	ıme:		
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Test Report Issue Date
Jun. 14, 2013

# <u>Test Report Serial No.</u> 052813OWD-1235SAR

<u>Description of Test(s)</u> Specific Absorption Rate

# Test Report Revision No. Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



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Applicant:	HAF	HARRIS Corporation FCC ID: OWDTR-0109-E IC: 3636B-		3636B-0109	HARRIS			
DUT Type:	DUT Type: Portable UHF Band PTT Radio Transceiver with Bluetooth				DUT Name: XG-25P UHF-L			
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Date(s) of Evaluation
May 30-Jun7, 2013

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Jun. 14, 2013

#### <u>Test Report Serial No.</u> 052813OWD-1235SAR

Description of Test(s) RF Exposure Category
Specific Absorption Rate Occupational (Controlled)





REVISION HISTORY								
REVISION NO.	DESCRIPTION	IMPLEMENTED BY	RELEASE DATE					
1.0	1st Release	Mike Meaker	Jun. 14, 2013					

TEST REPORT SIGN-OFF								
DEVICE TESTED BY REPORT PREPARED BY QA REVIEW BY REPORT APPROVE								
Mike Meaker	Cheri Frangiadakis	Mike Meaker	Mike Meaker					

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:	3636B-0109		HARRIS
DUT Type:	Por	table UHF Band PTT	Band PTT Radio Transceiver with Bluetooth DUT Name: XG-25P UHF-L					
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<u>Description of Test(s)</u>
Specific Absorption Rate

RF Exposure Category
Occupational (Controlled)

Rev. 1.0 (1st Release)

RF Exposure Category

Test Report Revision No.



#### 1.0 INTRODUCTION

This measurement report demonstrates that the HARRIS Corporation XG-25P UHF-L Portable PTT Radio Transceiver with Bluetooth complies with the SAR (Specific Absorption Rate) RF exposure requirements specified in FCC 47 CFR §2.1093 (see reference [1]) and Health Canada's Safety Code 6 (see reference [2]) for the Occupational / Controlled Exposure environment. The measurement procedures described in FCC OET Bulletin 65, Supplement C 01-01 (see reference [3]), IC RSS-102 Issue 4 (see reference [4]), IEEE Standard 1528-2003 (see reference [5]) and IEC 62209-2:2010 (see reference [6]) were employed. A description of the device, operating configuration, detailed summary of the test results, methodology and procedures used in the evaluation, equipment used and the various provisions of the rules are included within this test report.

#### 2.0 SAR MEASUREMENT SYSTEM

Celltech Labs Inc. SAR measurement facility utilizes the Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The DASY4 measurement system is comprised of the measurement server, robot controller, computer, near-field probe, probe alignment sensor, specific anthropomorphic mannequin (SAM) phantom, and various planar phantoms for head and/or body SAR evaluations. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The Staubli robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electrooptical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the DASY4 measurement server. The DAE4 utilizes a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16-bit AD-converter and a command decoder and control logic unit. Transmission to the DASY4 measurement server is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe-mounting device includes two different sensor systems for frontal and sidewise probe contacts. The sensor systems are also used for mechanical surface detection and probe collision detection. The robot uses a controller with a built in VME-bus computer.



Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:	IC: 3636B-0109		HARRIS
DUT Type:	DUT Type: Portable UHF Band PTT Radio Transceiver with Bluetooth				DUT Name: XG-25P UHF-L			
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Rev. 1.0 (1st Release)



### 3.0 RF CONDUCTED OUTPUT POWER MEASUREMENTS

	MEASURED RF CONDUCTED OUTPUT POWER LEVELS									
Test Freq.	Mode	System Radio		Scan F	Radio	Method				
restricq.	Mode	Watts	dBm	Watts	dBm	Wicthod				
408		5.06	37.0	5.17	37.1					
418		5.01	37.0	5.07	37.1					
428	CW	5.01	37.0	5.09	37.1	Average Conducted				
443	CVV	4.80	36.8	4.92	36.9	Average Conducted				
458		4.93	36.9	4.97	37.0					
470		5.14	37.1	5.20	37.2					

#### **Notes**

- 1. The test channels were selected in accordance with the procedures specified in FCC KDB 447498 (see reference [8]).
- 2. The RF conducted output power levels of the DUT were measured by Celltech Labs prior to the SAR evaluations using a Gigatronics 8652A Universal Power Meter at the external antenna connector of the radio in accordance with requirements of FCC 47 CFR §2.1046 (see reference [13]) and IC RSS-Gen (see reference [14]).

## 4.0 NO. OF TEST CHANNELS (Nc)

Α	ntenna Part No. Antenna Type		Antenna Freq. Range	N <sub>c</sub>	Test Frequencies (MHz)
1	KRE 101 1219/10	Helical Stub	403 - 430 MHz	3	408, 418, 428
2	KRE 101 1219/12	Helical Stub	440 - 470 MHz	3	443, 458, 470
3	KRE 101 1223/10	Whip	378 - 430 MHz	3	408, 418, 428
4	KRE 101 1223/12	Whip	440 - 470 MHz	3	443, 458, 470

Note: The number of test channels (Nc) were calculated in accordance with the procedures specified in FCC KDB 447498 (see reference [8]).

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:	3636B-0109		HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	-,	
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## 5.0 MANUFACTURER'S DISCLOSED ACCESSORY LISTING

Accessory ID #	ACCESSORY CATEGORY:	ANTENNA	
for Test Report	Part Number	Description	SAR Evaluation
1	KRE 101 1219/10	Helical Stub (403-430 MHz)	Yes
2	KRE 101 1219/12	Helical Stub (440-470 MHz)	Yes
3	KRE 101 1223/10	1/4-wave Whip (378-430 MHz)	Yes
4	KRE 101 1223/12	1/4-wave Whip (440-470 MHz)	Yes
Accessory ID #	ACCESSORY CATEGORY:	BATTERY	
for Test Report	Part Number	Description	SAR Evaluation
а	BT-023406-003	Ni-MH, immersible, non-IS, 7.5V, 2400mAh	Yes
b	BT-023406-004	Ni-MH, immersible, <is> (7.5V, 2400mAh)</is>	Yes
С	BT-023406-005	Li-ion, immersible, non-IS (7.4V, 2000mAh)	Yes
d	BT-023436-001	Lithium-polymer, immersible, non-IS (7.4V, 3000mAh)	Yes
Accessory ID #	ACCESSORY CATEGORY:	BODY-WORN	
for Test Report	Part Number	Description	SAR Evaluation
1	14011-0012-01	Kit containing: 14011-0011-01 BEE Nylon case (Black) (with radio retaining strap) & CC-014527 BEE Leather Belt Loop	Yes
2	14011-0012-02	Kit containing: 14011-0011-02 BEE Nylon case (Orange) (with radio retaining strap) & CC-014527 BEE Leather Belt Loop	No <sup>1</sup>
3	14011-0012-03	Kit contains: 14011-0011-03 BEE Leather Case (with radio retaining strap) w/o Shoulder Strap D-rings, FM-017262-001 Swivel Mount & CC-014527 BEE Leather Belt Loop	Yes
4	14011-0012-04	Kit contains: 14011-0011-04 BEE Leather Case with Shoulder Strap D-rings (with radio retaining strap), FM-017262-001 Swivel Mount & CC-014524-001 BEE Shoulder Strap	Yes
5	CC23894	Metal Belt Clip (Standard)	Yes
6	FM-017262-001 CC-014527	Swivel Mount Belt Loop, Leather (BEE)	Yes
7	CC-014524-002	[BEE] Short Leather Retaining Strap (For use with shoulder strap application)	No <sup>2</sup>
8	KRY1011609/1 FM-017262-001	Merzon belt loop D-swivel	No <sup>3</sup>
9	14011-0011-01 KRY1011609/1	BEE Black nylon case Merzon belt loop	No <sup>3</sup>
10	14011-0011-02 KRY1011609/1	BEE Orange nylon case Merzon belt loop	No <sup>3</sup>
11	14011-0011-03 KRY1011609/1 FM-017262-001	BEE leather case Merzon belt loop D-swivel	No <sup>3</sup>

#### Note:

- 1) The orange nylon case differs only in color from the black nylon case and therefore was not tested.
- 2) The Short retaining strap has no impact on SAR compared to the regular long strap and therefore was not tested.
- 3) The alternate Merzon Belt-loop is similar in construction to the standard belt-loop, therefore it was not tested.

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:	3636B-0109		HARRIS
DUT Type:	Por	table UHF Band PTT Radio Transceiver with Bluetooth DUT Name: XG-25P UHF-L						
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RF Exposure Category



Accessory ID #	ACCESSORY CA	TEGORY: AUDIO		
for Test Report	Part Number	Description	Audio Accessory Grouping	SAR Evaluation
G1a	EA-009580-001	Earphone Kit, Black	1	Yes
G1b	EA-009580-002	Earphone Kit, Beige	]	No <sup>1</sup>
G2a	EA-009580-003	2-Wire Kit, Palm mic, Black	2	Yes
G2b	EA-009580-004	2-Wire Kit, Palm mic, Beige	2	No <sup>1</sup>
G3a	EA-009580-005	3-Wire Kit, Mini-Lapel Mic, Black	3	Yes
G3b	EA-009580-006	3-Wire Kit, Mini-Lapel Mic, Beige	3	No <sup>1</sup>
G4a	EA-009580-007	Explorer Headset w/ PTT		No
G4b	EA-009580-008	Lightweight headset single spkr w/ PTT		No
G4c	EA-009580-009	Breeze Headset w/ PTT		No
G4d	EA-009580-011	Ranger Headset w/ PTT	4	Yes
G4e	EA-009580-016	Breeze headset w/ PTT & pigtail jack		No
G4f	EA-009580-017	Hurricane headset w/ PTT		No
G4g	EA-009580-018	Hurricane headset w/ PTT & pigtail jack		No
G5	EA-009580-012	Skull mic w/body PTT & earcup	5	Yes
G6a	EA-009580-010	Headset, heavy duty, N/C behind the head, w/ PTT	6	Yes
G6b	EA-009580-013	Headset, heavy duty, N/C over the head, w/ PTT	0	No
G7a	EA-009580-014	Throat mic w/acoustic tube & body PTT	7	Yes
G7b	EA-009580-015	Throat mic w/acoustic tube, body PTT, & ring PTT	7	No
G8a	MC-023933-001	Speaker-Mic No Ant. (cc), <is></is>		Yes
G8b	MC-009104-002	Speaker-Mic GPS, non-IS		No
G8c	MC-011617-601	Speaker-Mic Ruggedized Coil Cord	8	No
G8d	MC-011617-611 Speaker-Mic Ruggedized Coil Cord,P7300,Hirose			No
G8e	MC-011617-701	Speaker-Mic Standard - Non Ant		No
	LS103239V1	Earphone for Speaker-mic	n/a	No <sup>2</sup>
	FM-014712	UDC Weatherproof Cover	n/a	No <sup>2</sup>

#### Note:

- 1) The Beige versions differ only in color from the black and therefore were not tested.
- 2) The Earphone and Weatherproof cover are not tested as they have no impact on SAR.

Manufacturer's disclosed accessory listing information provided by HARRIS Corporation.

\*All audio accessories can be used with any body worn and antenna combination.

Applicant:	HAF	RRIS Corporation	Corporation FCC ID: OWDTR-0109-E IC: 3636B-0109		HARRIS			
DUT Type:	Por	Portable UHF Band PTT Radio Transceiver with Bluetooth DUT Name					XG-25P UHF-L	
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# **6.0 FLUID DIELECTRIC PARAMETERS**

	FLU	JID DIEL	ECTRIC	PARAME	ETERS	
Date: May	30, 2013	Free	quency: 450 l	MHz	Tissu	e: Head
Freq	Test_e	Test_s	Target_e	Target_s	Deviation Permittivity	Deviation Conductivity
0.350	48.58	0.8	43.5	0.87	11.68%	-8.05%
0.360	47.91	0.82	43.5	0.87	10.14%	-5.75%
0.370	47.1	0.82	43.5	0.87	8.28%	-5.75%
0.380	46.98	0.83	43.5	0.87	8.00%	-4.60%
0.390	47.05	0.81	43.5	0.87	8.16%	-6.90%
0.400	46.66	0.84	43.5	0.87	7.26%	-3.45%
0.410	46.68	0.83	43.5	0.87	7.31%	-4.60%
0.420	45.87	0.85	43.5	0.87	5.45%	-2.30%
0.430	46.32	0.86	43.5	0.87	6.48%	-1.15%
0.440	45.65	0.87	43.5	0.87	4.94%	0.00%
0.450	45.49	0.88	43.5	0.87	4.57%	1.15%
0.460	44.92	0.87	43.5	0.87	3.26%	0.00%
0.470	45.47	0.91	43.5	0.87	4.53%	4.60%
0.480	45.09	0.91	43.5	0.87	3.66%	4.60%
0.490	44.75	0.91	43.5	0.87	2.87%	4.60%
0.500	44.51	0.91	43.5	0.87	2.32%	4.60%
0.510	44.25	0.93	43.5	0.87	1.72%	6.90%
0.520	43.98	0.93	43.5	0.87	1.10%	6.90%
0.530	43.61	0.96	43.5	0.87	0.25%	10.34%
0.540	44.06	0.96	43.5	0.87	1.29%	10.34%
0.550	43.4	0.98	43.5	0.87	-0.23%	12.64%

Test Date	Fluid Type	Ambient Temperature	Fluid Temperature	Fluid Depth	Atmospheric Pressure	Relative Humidity	ρ (Kg/m³)
May 30	450 Head	23°C	21.0°C	≥ 15 cm	101.5 kPa	32%	1000

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		HARRIS	
DUT Type:	Por	Portable UHF Band PTT Radio Transceiver with Bluetooth					DUT Name: XG-25P UHF-L	
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

<u>Description of Test(s)</u> Specific Absorption Rate

Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



	FLI	JID DIEL	ECTRIC	PARAME	ETERS	
Date: May	31, 2013	Free	quency: 450 l	MHz	Tissu	ie: Head
Freq	Test_e	Test_s	Target_e	Target_s	Deviation Permittivity	Deviation Conductivity
0.350	47.95	0.79	43.5	0.87	10.23%	-9.20%
0.360	47.01	0.79	43.5	0.87	8.07%	-9.20%
0.370	46.59	0.8	43.5	0.87	7.10%	-8.05%
0.380	45.81	0.81	43.5	0.87	5.31%	-6.90%
0.390	45.85	0.82	43.5	0.87	5.40%	-5.75%
0.400	45.31	0.82	43.5	0.87	4.16%	-5.75%
0.408*	45.7	0.836	43.5	0.87	5.06%	-3.91%
0.410	45.6	0.84	43.5	0.87	4.83%	-3.45%
0.420	45.95	0.83	43.5	0.87	5.63%	-4.60%
0.430	45.43	0.85	43.5	0.87	4.44%	-2.30%
0.440	45.35	0.86	43.5	0.87	4.25%	-1.15%
0.450	44.63	0.88	43.5	0.87	2.60%	1.15%
0.460	44.79	0.88	43.5	0.87	2.97%	1.15%
0.470	44.73	0.89	43.5	0.87	2.83%	2.30%
0.480	44.44	0.9	43.5	0.87	2.16%	3.45%
0.490	43.87	0.9	43.5	0.87	0.85%	3.45%
0.500	44.16	0.91	43.5	0.87	1.52%	4.60%
0.510	43.28	0.91	43.5	0.87	-0.51%	4.60%
0.520	43.24	0.94	43.5	0.87	-0.60%	8.05%
0.530	43.33	0.94	43.5	0.87	-0.39%	8.05%
0.540	43.1	0.95	43.5	0.87	-0.92%	9.20%
0.550	43.15	0.96	43.5	0.87	-0.80%	10.34%

<sup>\*</sup>interpolated using DASY4 software

Test Date	Fluid Type	Ambient Temperature	Fluid Temperature	Fluid Depth	Atmospheric Pressure	Relative Humidity	ρ ( <b>Kg</b> /m³)
May 31	450 Head	22°C	22.0°C	≥ 15 cm	102.5 kPa	32%	1000

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:	3636B-0109		HARRIS
DUT Type:	Por	Portable UHF Band PTT Radio Transceiver with Bluetooth DUT Name: XG-25P UHF-L						
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



	FLU	JID DIEL	ECTRIC	PARAME	ETERS	
Date: Jun 3,	4, 5, 2013	Free	quency: 450	MHz	Tissu	e: Body
Freq	Test_e	Test_s	Target_e	Target_s	Deviation Permittivity	Deviation Conductivity
0.350	59.25	0.89	56.7	0.94	4.50%	-5.32%
0.360	59.37	0.86	56.7	0.94	4.71%	-8.51%
0.370	58.66	0.88	56.7	0.94	3.46%	-6.38%
0.380	59.52	0.88	56.7	0.94	4.97%	-6.38%
0.390	58.45	0.9	56.7	0.94	3.09%	-4.26%
0.400	57.68	0.9	56.7	0.94	1.73%	-4.26%
0.408*	58.2	0.908	56.7	0.94	2.65%	-3.40%
0.410	58.29	0.91	56.7	0.94	2.80%	-3.19%
0.420	58.11	0.92	56.7	0.94	2.49%	-2.13%
0.430	58.14	0.93	56.7	0.94	2.54%	-1.06%
0.440	57.79	0.94	56.7	0.94	1.92%	0.00%
0.443*	57.7	0.94	56.7	0.94	1.76%	0.00%
0.450	57.37	0.94	56.7	0.94	1.18%	0.00%
0.458*	57.4	0.956	56.7	0.94	1.23%	1.70%
0.460	57.46	0.96	56.7	0.94	1.34%	2.13%
0.470	56.92	0.95	56.7	0.94	0.39%	1.06%
0.480	56.84	0.97	56.7	0.94	0.25%	3.19%
0.490	56.86	0.97	56.7	0.94	0.28%	3.19%
0.500	56.86	0.99	56.7	0.94	0.28%	5.32%
0.510	56.45	0.98	56.7	0.94	-0.44%	4.26%
0.520	56.3	0.99	56.7	0.94	-0.71%	5.32%
0.530	56.34	1.02	56.7	0.94	-0.63%	8.51%
0.540	56.31	1.02	56.7	0.94	-0.69%	8.51%
0.550	56.17	1.05	56.7	0.94	-0.93%	11.70%

<sup>\*</sup>interpolated using DASY4 software

Test Date	Fluid Type	Ambient Temperature	Fluid Temperature	Fluid Depth	Atmospheric Pressure	Relative Humidity	ρ ( <b>Kg/m</b> ³)
June 3	450 Body	22°C	21.8°C	≥ 15 cm	101.7 kPa	36%	1000
June 4	450 Body	23°C	21.8°C	≥ 15 cm	102.1 kPa	36%	1000
June 5	450 Body	23°C	21.8°C	≥ 15 cm	102.1 kPa	36%	1000

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	able UHF Band PTT Radio Transceiver with Bluetooth DUT Name: XG-25P						
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Test Report Issue Date
Jun. 14, 2013

<u>Test Report Serial No.</u> 052813OWD-1235SAR

Description of Test(s)
Specific Absorption Rate

Rev. 1.0 (1st Release)

RF Exposure Category

Occupational (Controlled)

Test Report Revision No.



	FLU	JID DIEL	ECTRIC	PARAME	ETERS	
Date: Jun 6	& 7, 2013	Fred	quency: 450 l	MHz	Tissu	e: Body
Freq	Test_e	Test_s	Target_e	Target_s	Deviation Permittivity	Deviation Conductivity
0.350	59.17	0.85	56.7	0.94	4.36%	-9.57%
0.360	58.2	0.84	56.7	0.94	2.65%	-10.64%
0.370	57.78	0.88	56.7	0.94	1.90%	-6.38%
0.380	57.65	0.88	56.7	0.94	1.68%	-6.38%
0.390	57.39	0.86	56.7	0.94	1.22%	-8.51%
0.400	57.31	0.9	56.7	0.94	1.08%	-4.26%
0.408*	57.6	0.9	56.7	0.94	1.59%	-4.26%
0.410	57.73	0.9	56.7	0.94	1.82%	-4.26%
0.420	57.37	0.92	56.7	0.94	1.18%	-2.13%
0.430	57.44	0.9	56.7	0.94	1.31%	-4.26%
0.440	56.11	0.9	56.7	0.94	-1.04%	-4.26%
0.443*	56.2	0.909	56.7	0.94	-0.88%	-3.30%
0.450	56.46	0.93	56.7	0.94	-0.42%	-1.06%
0.460	56.64	0.93	56.7	0.94	-0.11%	-1.06%
0.470	56.92	0.94	56.7	0.94	0.39%	0.00%
0.480	56.67	0.94	56.7	0.94	-0.05%	0.00%
0.490	55.87	0.98	56.7	0.94	-1.46%	4.26%
0.500	55.91	0.97	56.7	0.94	-1.39%	3.19%
0.510	55.63	0.97	56.7	0.94	-1.89%	3.19%
0.520	55.23	0.99	56.7	0.94	-2.59%	5.32%
0.530	55.97	1	56.7	0.94	-1.29%	6.38%
0.540	55.64	1	56.7	0.94	-1.87%	6.38%
0.550	55.34	1.01	56.7	0.94	-2.40%	7.45%

<sup>\*</sup>interpolated using DASY4 software

Test Date	Fluid Type	Ambient Temperature	Fluid Temperature	Fluid Depth	Atmospheric Pressure	Relative Humidity	ρ (Kg/m³)
June 6	450 Body	22°C	21.9°C	≥ 15 cm	101.3 kPa	31%	1000
June 7	450 Body	22°C	21.9°C	≥ 15 cm	101.3 kPa	31%	1000

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS		
DUT Type:	Por	table UHF Band PTT	ole UHF Band PTT Radio Transceiver with Bluetooth DUT Name: XG-25P UHF-L							
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

<u>Description of Test(s)</u>
Specific Absorption Rate

RF Exposure Category
Occupational (Controlled)

Test Report Revision No.
Rev. 1.0 (1st Release)
RF Exposure Category



## 7.0 SAR MEASUREMENT SUMMARY

TAI	BLE 1			FAC	CE-HEL	D SA	R E	/ALU	ATION	RESUL	.TS						
	Dev	vice-Und	er-Test	XG-2	25P UHF-	L Rad	io Tra	nsceive	er (Syste	em)							
		Test	Date(s)	May	31, 2012												
С					1	2	2		3	4		5	6		7	8	
			Cond.		SAR W/k	g 1g			SAR W/k	g 1g		SAR W/	kg 1g		SAR W/k	g 1g	
R	Antenna Accessory	Test Freg.	Power Before	Ва	ttery a (Ad	dition	al)	Batt	ery b (Ad	ditional)	Ва	ttery c (A	dditional)	В	attery d ([	Default)	
	ID#	(MHz)	Test	100	% ptt d/f	50% p	ott d/f	100%	ptt d/f	50% ptt d		)% ptt d/f	50% ptt d/f	1009	% ptt d/f	50% ptt d/f	
			(W)	Dr	ift (dB)	50%+0	droop	Dri	ft dB	50%+droo	р [	rift dB	50%+droop	Dr	ift dB	50%+droop	
1		408	5.06		N/A				N/A			N/A		F1	3.01	1.51	
2		100	0.00		14// (				14// (			147	•		-0.307	1.62	
3	1 (219/10)	418	5.01		N/A			N/A N/A							N/A		
4		428	5.01		N/A			N/A N/A						NI/A			
5		420	3.01		IN/A				111/71								
6	6 443 4.80 N/A								N/A			N/A			N/A		
7	2   11   11								N/A			N/A	<u>l</u>		N/A		
8	(219/12)	470	F 44	F5	3.79	1.9	90	F6	3.76	1.88	F-7	3.74	1.87	F2	3.63	1.82	
9		470	5.14	FO	-0.342	2.0	05	го	-0.276	2.00	F7	-0.450	2.07	ΓZ	-0.339	1.96	
10		408	5.06	N/A					N/A			N/A		F3	2.62	1.31	
11	3	400	0.00	N/A			IN/A				14/7			-0.140	1.35		
12	(223/10)	418	5.01		N/A				N/A			N/A			N/A		
13		428	5.01		N/A				N/A			N/A			N/A		
14		443	4.80		N/A				N/A			N/A	1		N/A		
15	4	458	4.93		N/A				N/A			N/A	1		N/A		
16	(223/12)	470	5.14		N/A				N/A			N/A		F4	3.26	1.63	
17		470	5.14		IN/A				IN/A			14/7-		14	-0.190	1.70	
	SAR LIMITS							HEA		SP	ATIAL P	EAK			RE CATE		
	FCC 47 CFR 2.1093 Health Canada Safety Code 6							8.0 W/	kg	1 g	ram ave	rage	Occ	upatior	al / Contr	olled	
Note C = 0	es Column; R = F	Row						Fx (	F = Face)	denotes th	e corres	nonding Fa	ace SAR Plot	# as she	own in Anr	endix A	
	Mode = CW (		ated Contin	nuous \	Nave)					rski Plana				20 011			
	ront of DUT				<u> </u>	pendix	k D)	1			nna Distance to Planar Phant		anar Phantor	ntom (see Appendix D)		D)	
	(Front of DUT Parallel to Planar Phantom)						,		Antenna 1		Antenr		Antenna	_	Ant	enna 4	
	2.5 cm								5.5 cm		5.5 c	n	5.5 cm		5.	5 cm	

#### Test Procedures in accordance with FCC KDB 643646 (see reference [9])

- 1. For face-held configuration, battery "d" was selected as the default battery (highest mAh).
- 2. When the head SAR of an antenna tested on the highest output power channel with the default battery is  $\leq 3.5$  W/kg, testing of all other required channels is not necessary.
- 3. When the SAR for all antennas tested using the default battery is  $\leq$  4.0 W/kg, test additional batteries using the antenna and channel configuration that resulted in the highest SAR among all antennas.
- 4. When test reduction applies, the data table entries for such configurations are denoted with N/A (Not Applicable).

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS	
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	ıme:	XG-25P UHF-L		
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

<u>Description of Test(s)</u> <u>RF Exposure Category</u> Specific Absorption Rate Occupational (Controlled)

Rev. 1.0 (1st Release)

RF Exposure Category

Test Report Revision No.



TA	BLE 2			FAC	CE-HEL	D SA	R EV	/ALUATION	RESUL	TS				
	Dev	vice-Und	ler-Test	XG-2	25P UHF-	L Radi	io Trai	nsceiver (Scan	)					
		Test	Date(s)	May	31, 2012									
С					1	2		3	4	5	6		7	8
	Automa	Test	Cond. Power		SAR W/k			SAR W/k			V/kg 1g		SAR W/k	
R	Antenna Accessory	Freq.	Before		ttery a (Ad	1		Battery b (Ac	i -		Additional)		attery d (I	1
	ID#	(MHz)	Test (W)		% ptt d/f	50% p	-	100% ptt d/f	50% ptt d/f	· ·	50% ptt d/f		% ptt d/f	50% ptt d/f
4			(**)	Dr	ift (dB)	50%+0	iroop	Drift dB	50%+droop	Drift dB	50%+droop	Dr	rift dB	50%+droop
1		408	5.17		N/A			N/A		N	I/A	F8	3.11	1.56
2	1												-0.231	1.64
3	(219/10)	418	5.07		N/A		N/A N/A					N/A		
5		428	5.09		N/A			N/A N/A						
6		443	4.92	N/A				N/A		<u> </u>				
7		458	4.97	N/A					N/A N				N/A N/A	
8	2 (219/12)	430	4.97	N/A 3.86 <b>1.93</b>			12	IN/A		ı'	WA		IN/A	
9		470	5.20	F9	-0.142	1.9		N/A		N	I/A		N/A	
10		408	5.17	N/A				N/A			I/A	F10	2.66	1.33
11	3	400	3.17	N/A				IN/A			1 10	-0.068	1.35	
12	(223/10)	418	5.07		N/A			N/A		N				
13		428	5.09		N/A			N/A		N	I/A		N/A	
14		443	4.92		N/A			N/A		١	I/A		N/A	
15	4	458	4.97		N/A			N/A		N	I/A		N/A	
16	(223/12)	470	5.20		N/A			N/A			I/A	F11	3.39	1.70
17		470	5.20		IN/A			IN/A		ľ	I/A	FII	0.005	1.70
	SAR LIMITS							HEAD	SPA	TIAL PEAK			RE CATE	
	CC 47 CFR 2.1	093	Health C	anada	Safety Cod	de 6		8.0 W/kg	1 gr	am average	Occ	upation	nal / Contr	olled
Note C = 0	es Column; R = F	Row						Fx (F = Face)	denotes the	corresponding	Face SAR Plot	# as sh	own in Anr	nendix A
	: Mode = CW (		ated Conti	านดมร \	Wave)			Phantom = B			. acc care i lot	,, uo oi i		JOHUIN A
	ront of DUT	'				pendix	( D)				Planar Phantom (see Appendix D)		D)	
					r Phantom			Antenna		Antenna 2	Antenna	•		enna 4
			2.5 cm					5.5 cm		5.5 cm	5.5 cm		5.	5 cm

Subsets of tests were performed for the Scan radio model variant based on re-evaluating the maximum SAR levels per antenna configuration from the System model evaluations.

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	XG-25P UHF-L	
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1.6 cm

Date(s) of Evaluation May 30-Jun7, 2013

Test Report Issue Date

Test Report Serial No. 052813OWD-1235SAR

Test Report Revision No. Rev. 1.0 (1st Release)



Description of Test(s) Jun. 14, 2013 Specific Absorption Rate

RF Exposure Category Occupational (Controlled)

TA	BLE 3			BOI	Y-WOI	RN S	AR E	VAL	JATIO	N RESUI	TS					
	Dev	vice-Und	ler-Test	XG-2	5P UHF-	L Radi	o Trar	nsceive	er (Syste	m)						
	Body-worn	Accesso	ory ID #	5 (De	fault)											
	Audio	Accesso	ory ID #	G8a	(Default)											
		Test	Date(s)	June	3 & 4, 20	12										
С					1	2		;	3	4		5	6		7	8
			Cond.		SAR W/k	g 1g		;	SAR W/k	g 1g		SAR W/k	g 1g		SAR W/k	g 1g
R	Antenna Accessory	Test Freq.	Power Before	Bat	tery a (Ad	ditiona	al)	Batte	ery b (Ad	ditional)	Batt	ery c (Ad	ditional)	В	attery d ([	Default)
	ID#	(MHz)	Test	100%	% ptt d/f	50% p	tt d/f		ptt d/f	50% ptt d/f	100%	ptt d/f	50% ptt d/f	1009	% ptt d/f	50% ptt d/f
			(W)	Dri	ft (dB)	50%+0	lroop	Drif	t dB	50%+droop	Dri	ft dB	50%+droop	Dr	ift dB	50%+droop
1		408	5.06		N/A				N/A			N/A		B1	5.24	2.62
2	1														-0.392	2.87
3	(219/10)	418	5.01		N/A				N/A			N/A		N/A		
4		428	5.01		N/A				N/A			N/A				
5															N/A	
6		443	4.80		N/A				N/A			N/A		,	N/A	
7	7 2 458 4.93 N/A								N/A		N/A			В3	7.85	3.93
8	(219/12)	400	4.00		14/7 (						IN/F			ВО	-0.418	4.32
9	,,	470	5.14		N/A				N/A			N/A		B2	8.25	4.13
10		470	0.14		14/7 (				14// (			14/7 (		52	-0.257	4.38
11		408	5.06		N/A				N/A			N/A		B4	5.51	2.76
12	3	100	0.00		14,71				1477			147.1		٥,	-0.132	2.84
13	(223/10)	418	5.01		N/A				N/A			N/A			N/A	
14		428	5.01		N/A				N/A			N/A			N/A	
15		443	4.80	B8	9.07	4.	54	В9	8.99	4.50	B10	8.46	4.23	B7	8.78	4.39
16		7-10	7.00	50	-0.173	4.7	72	טפ	-0.669	5.24	D10	-0.210	4.44	D1	-0.288	4.69
17	4	458	4.93		N/A				N/A			N/A		В6	8.17	4.09
18	(223/12)	450	4.93		IN/A				IN/A			IN/A		ВО	-0.248	4.33
19	19 470 5.14 N/A								N/A			N/A		B5	8.71	4.36
20	20								14/7-3			19/73		БЭ	-0.340	4.71
		SAF	RLIMITS					BODY	1	SPA	TIAL PE	AK			RE CATE	
	C 47 CFR 2.1	1093	Health C	anada S	Safety Cod	de 6		8.0 W/I	кg	1 gra	am avera	ge	Occ	upation	al / Contr	olled
Note	es Column; R = F	20W						Bv /5	R = Rody)	denotes the	correct	anding Ro	dy SAR Plot	# ac ch	own in An	nendiy A
	Mode = CW (		ated Contin	านดนร V	Vave)			`	- ,,	arski Planar	<u> </u>		uy OAN FIOL	# a3 311	Ovvii iii Ap	JOHUIA A
	ack of DUT D	•				pendix	(D)						nar Phanton	n (see /	Appendix	D)
			Parallel to				-,	A	Antenna 1		Antenna	1	Antenna	•		enna 4

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS				
DUT Type:	Por	table UHF Band PTT	Radio Trans	XG-25P UHF-L								
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2.0 cm

2.0 cm

2.0 cm

2.0 cm



Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



#### Test Procedures applied in accordance with FCC KDB 643646 (see reference [9])

- 1. For Body-worn configuration, battery "d" was selected as the default battery\*.
- 2. When the body SAR of an antenna is  $\leq$  3.5 W/kg, testing of all other required channels is not necessary for that antenna.
- 3. When the body SAR of an antenna is >4.0 W/kg, test adjacent channels.
- 3. When the SAR for all antennas tested using the default battery is  $\leq$  6.0 W/kg, test additional batteries using the antenna and channel configuration that resulted in the highest SAR among all antennas.
- 4. The audio accessory G8a was selected as the default audio accessory based on preliminary evaluations.
- 5. When test reduction applies, the data table entries for such configurations are denoted with N/A (Not Applicable).



Test Report Issue Date

Jun. 14, 2013

Description of Test(s)

Specific Absorption Rate

Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



TA	BLE 4			BOD	Y-WOF	RN S	AR E	EVALUATIO	N RESUL	.TS				
	Dev	/ice-Und	er-Test	XG-25	P UHF-I	L Rad	io Tra	nsceiver (Scan	1)					
	Body-worn	Accesso	ory ID #	5 (Def	ault)									
	Audio	Accesso	ory ID #	G8a (	(Default)									
		Test	Date(s)	June 3	3 & 4, 20	12								
С					1	2	2	3	4	5	6		7	8
			Cond.		SAR W/k	g 1g		SAR W/k	g 1g	SAR W/	rg 1g		SAR W/k	g 1g
R	Antenna Accessory	Test Freq.	Power Before	Batt	ery a (Ad	dition	al)	Battery b (Ad	l .	Battery c (Ad	lditional)	Ва	attery d ([	Default)
	ID#	(MHz)	Test	100%	ptt d/f	50%	ott d/f	100% ptt d/f	50% ptt d/f	100% ptt d/f	50% ptt d/f	100%	6 ptt d/f	50% ptt d/f
			(W)	Drift	(dB)	50%+	droop	Drift dB	50%+droop	Drift dB	50%+droop	Dri	ift dB	50%+droop
1		408	5.17		N/A			N/A		N/A		B11	4.97	2.49
2	4												2.51	
3	1 (219/10)	418	5.07		N/A			N/A		N/A			N/A	
4	,	428	5.09		N/A			N/A		N/A			N/A	
5		420	5.09		IN/A			IN/A		IN/A			IN/A	
6		443	4.92	N/A				N/A		N/A				
7	2	458	4.97	N/A				N/A		N/A			N/A	
8	(219/12)	470	F 20		NI/A			NI/A		N1/A		B12	8.31	4.16
9		470	5.20	N/A				N/A		N/A		B12	-0.157	4.31
10		408	5.17	N/A				N/A		N/A		B13	6.25	3.13
11	3	400	5.17		IN/A			N/A		IN/A	D13	3.13		
12	(223/10)	418	5.07		N/A			N/A		N/A			N/A	
13		428	5.09		N/A			N/A		N/A			N/A	
14		443	4.92	B14	9.21	4.	61	N/A		N/A			N/A	
15	_	443	4.92	D14	0.038	4.	61	IN/A		IN/A			IN/A	
16	4 (223/12)	458	4.97		N/A			N/A		N/A			N/A	
17	(===, :=,	470	5.20		N/A			N/A		N/A			N/A	
18		470	5.20		N/A			IN/A		IN/A			IN/A	
		RLIMITS					BODY	SPA	TIAL PEAK	RF E	XPOSU	RE CATE	GORY	
	C 47 CFR 2.1	093	Health C	anada S	afety Cod	le 6		8.0 W/kg	1 gra	ım average	Occ	upation	al / Contr	olled
Note		)ou						Dv /D = Da + 3	donot 41	oorroone adia a Di	du CAD DI-t	# 05 51-	ou (o l = ^ -	andix A
-	Column; R = F		atod Contin	augus M	avo)			Phantom = B		corresponding Bo	ouy SAK Plot	# as sno	own in Ap	Delidix A
	Mode = CW (					nandi	( D)			Pnantom  a Distance to Pla	nar Phanton	n (see <i>l</i>	nnendiv	D)
			Parallel to				(0)	Antenna		Antenna 2	Antenna	`	-	enna 4
			1.6 cm					2.0 cm		2.0 cm	2.0 cm			0 cm

Test Report Serial No.

052813OWD-1235SAR

Subsets of tests were performed for the Scan radio model variant based on re-evaluating the maximum SAR levels per antenna configuration from the System model evaluations.

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS			
DUT Type:	Por	table UHF Band PTT									
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Test Report Issue Date

Test Report Serial No. 052813OWD-1235SAR

Rev. 1.0 (1st Release) RF Exposure Category

Test Report Revision No.



Description of Test(s) Jun. 14, 2013 Specific Absorption Rate

Occupational (Controlled)

TAI	BLE 5			BOI	OY-WOF	RN S	AR E	VALU	IATION	N RES	JL	TS					
	Dev	/ice-Und	ler-Test	XG-2	5P UHF-L	Radi	o Tran	nsceive	r (Syste	m)							
	Body-worn	Accesso	ory ID #	1 (Ad	lditional)				-								
	Audio	Accesso	ory ID #	G8a	(Default)												
		Test	Date(s)		4 & 5, 20	12											
С					1	2		3	3	4			5	6		7	8
			Cond.		SAR W/kg	g 1g		,	SAR W/kg	g 1g			SAR W/k	g 1g		SAR W/k	g 1g
R	Antenna Accessory	Test Freq.	Power Before	Bat	tery a (Ad	ditiona	ıl)	Batte	ry b (Ad	ditional)		Batt	ery c (Ac	lditional)	Ва	attery d (C	Default)
K	ID#	(MHz)	Test	100%	% ptt d/f	50% pt	tt d/f	100%	ptt d/f	50% ptt o	d/f	100%	ptt d/f	50% ptt d/f	100%	6 ptt d/f	50% ptt d/f
		,	(W)	Dri	ft (dB)	50%+d	roop	Drif	dB	50%+dro	ор	Drif	t dB	50%+droop	Dri	ft dB	50%+droop
1		408	5.06		N/A				N/A				N/A		B15	2.22	1.11
2		400	3.00		IN/A				IN/A				IN/A		ыз	-0.360	1.21
3	1 (219/10)	418	5.01		N/A				N/A				N/A			N/A	
4	(210/10)											N/A					
5		428	5.01		N/A				N/A				N/A			N/A	
6		443	4.80		N/A				N/A				N/A			N/A	
7								NI/A									
8	2	458	4.93		N/A				N/A				N/A			N/A	
9	(219/12)															2.61	1.31
10		470	5.14		N/A				N/A				N/A		B16	-0.311	1.40
11						N/A N/A										1.96	0.980
12	3	408	5.06		N/A			N/A				N/A			B17	-0.136	1.01
13	(223/10)	418	5.01		N/A				N/A			N/A				1	
14		428	5.01		N/A				N/A				N/A			N/A	
15		443	4.80		NI/A				NI/A				NI/A			NI/A	
16		443	4.60		N/A				N/A				N/A			N/A	
17	4	458	4.93		N/A				N/A				N/A			N/A	
18	(223/12)	456	4.93		IN/A				IN/A				IN/A			IN/A	
19	19 2.85						13	B20	2.55	1.28		B21	2.54	1.27	D10	2.72	1.36
20	20 470 5.14 B19 -C						18	B20 P	-0.555	1.45		DZ I	-0.343	1.37	B18	-0.148	1.41
		SAI	R LIMITS					BODY	•	SI	PAT	IAL PEA	AK	RF E	XPOSU	RE CATE	GORY
FC	C 47 CFR 2.1	093	Health C	anada S	Safety Cod	le 6		8.0 W/k	g	1	grar	m avera	ge	Occ	upation	al / Contr	olled
Note		<b></b>						I D (2	D 1 1	al a section of	u.				4		a a sa alla a A
	Column; R = F		atod Conti	0110110 14	(A)			`	• • • • • • • • • • • • • • • • • • • •	denotes f arski Plan		•		ody SAR Plot	# as she	own in App	pendix A
	Mode = CW (						D)	Phan						nar Dhantar	ntom (see Appendix D)		D)
Back of DUT Distance to Planar Phantom (see Appendi (Back of Radio Parallel to Planar Phantom)							ט)	Δ	Snor 1 ntenna	1		a Distan Intenna	1	nar Pnantor Antenna	· ·		enna 4
	•		4.5 cm			•			4.7 cm			4.7 cm		4.7 cm			7 cm

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS		
DUT Type:	Por	table UHF Band PTT								
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 0528130WD-1235SAR

Description of Test(s)

Specific Absorption Rate

Od

Rev. 1.0 (1st Release)

RF Exposure Category

Occupational (Controlled)

Test Report Revision No.



TA	BLE 6			BOD	Y-WOI	RN S	AR E	EVALUATIO	N RESUL	.TS				
	Dev	/ice-Und	er-Test	XG-25	P UHF-	L Radi	o Tra	nsceiver (Scan	)					
	Body-worn	Accesso	ory ID#	1 (Add	ditional)									
	Audio	Accesso	ory ID #	G8a (	Default)									
		Test	Date(s)	June 4	1 & 5, 20	12								
С			( )		1	2		3	4	5	6		7	8
			Cond.		SAR W/k	g 1g		SAR W/k	g 1g	SAR W/I	cg 1g		SAR W/k	g 1g
R	Antenna Accessory	Test Freq.	Power Before	Batte	ery a (Ad	ditiona	ıl)	Battery b (Ad	lditional)	Battery c (Ad	dditional)	В	attery d (I	Default)
IX .	ID#	(MHz)	Test	100%	ptt d/f	50% p	tt d/f	100% ptt d/f	50% ptt d/f	100% ptt d/f	50% ptt d/f	100%	% ptt d/f	50% ptt d/f
			(W)	Drift	(dB)	<b>50%+</b> c	lroop	Drift dB	50%+droop	Drift dB	50%+droop	Dr	ift dB	50%+droop
1		408	5.17		N/A			N/A		N/A		B22	2.18	1.09
2		400	3.17		19/74			19/74		IV/	•	DZZ	-0.238	1.15
3	1 (219/10)	418	5.07	N/A N/A				N/A		N/A			N/A	
4	(,	400	F 00		NI/A			NI/A		NI/A			NI/A	
5		428	5.09		N/A			N/A		N/A	ı		N/A	
6		443	4.92		N/A			N/A		N/A			N/A	
7	2	458	4.97	N/A				N/A		N/A			N/A	
8	(219/12)	470	5.00		<b>N1/A</b>			21/2				Doo	2.73	1.37
9		470	5.20	N/A				N/A		N/A		B23	-0.124	1.41
10		408	5.17	N/A			N/A		N/A		B24	2.11	1.06	
11	3	400	3.17		IN/A			IN/A		IN/A	D24	0.059	1.06	
12	(223/10)	418	5.07		N/A			N/A		N/A	N/A			
13		428	5.09		N/A			N/A		N/A	1		N/A	
14		443	4.92		N/A			N/A		N/A			N/A	
15	4										•			
16	(223/12)	458	4.97		N/A	ı		N/A		N/A			N/A	
17		470	5.20	B25	2.73	1.3	37	N/A		N/A			N/A	
18 0.059						1.3	37							
FC	SAR LIMITS FCC 47 CFR 2.1093 Health Canada Safety Code 6							BODY 8.0 W/kg		m average			RE CATE	
Note	s													
C = 0	Column; R = F	Row						Bx (B = Body)	denotes the	corresponding Bo	ody SAR Plot	# as sh	own in Ap	pendix A
Test	Mode = CW (	Unmodula	ted Contir	nuous W	ave)			Phantom = B						
В	Back of DUT Distance to Planar Phantom (see Appendix D) (Back of Radio Parallel to Planar Phantom)						D)			Antenna Distance to Planar Phanto		•		,
	(Back of Radio Parallel to Planar Phantom) 4.5 cm							Antenna 4.7 cm	1 A	Antenna 2 4.7 cm	Antenna 4.7 cm			enna 4 7 cm
<u> </u>			4.5 011					4.7 (111		7.1 UII	4.7 (111		4.	i Cili

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT						
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C = Column; R = Row

Test Mode = CW (Unmodulated Continuous Wave)

Back of DUT Distance to Planar Phantom (see Appendix D) (Back of Radio Parallel to Planar Phantom)

5.4 cm

Date(s) of Evaluation May 30-Jun7, 2013

Test Report Serial No. 052813OWD-1235SAR

Description of Test(s) RF Exposure Category Specific Absorption Rate Occupational (Controlled)

Test Report Revision No. Rev. 1.0 (1st Release)

Bx (B = Body) denotes the corresponding Body SAR Plot # as shown in Appendix A

Antenna 2

5.9 cm

Shortest Antenna Distance to Planar Phantom (see Appendix D)

Antenna 3

5.9 cm

Antenna 4

5.9 cm

ilac-MRA

Test Lab Certificate No. 2470.01

Test Report Issue Date
Jun 14 2013

TA	DI E 7			DOI	N WOL	ON CAD	<b>E</b> \/A	LATIO	I DECLI	TO					
IA	BLE 7								N RESUL	.15					
		vice-Und		XG-2	5P UHF-L	<sub>-</sub> Radio T	ransceive	er (Syste	em)						
	Body-worn	Accesso	ory ID #	3 (Ad	lditional)										
	Audio	Accesso	ory ID #	G8a	(Default)										
		Test	Date(s)	June	5 & 6 201	12									
C					1	2		3	4		5	6		7	8
			Cond.		SAR W/kg	g 1g		SAR W/k	g 1g		SAR W/k	g 1g		SAR W/k	g 1g
R	Antenna Accessory	Test Freg.	Power Before	Bat	tery a (Ad	ditional)	Batt	ery b (Ad	ditional)	Batt	ery c (Ad	ditional)	Ва	ttery d (C	Default)
	ID#	(MHz)	Test	1009	% ptt d/f	50% ptt d/	f 100%	ptt d/f	50% ptt d/f	100%	ptt d/f	50% ptt d/f	100%	6 ptt d/f	50% ptt d/f
			(W)	Dri	ft (dB)	50%+droo	Dri	ft dB	50%+droop	Dri	ft dB	50%+droop	Dri	ft dB	50%+droop
1		408	5.06		N/A			N/A			N/A		B26	1.40	0.700
2														-0.401	0.768
3	1 (219/10)	418	5.01		N/A			N/A			N/A			N/A	
4	,	428	5.01		N/A			N/A			N/A			N/A	
5		428	5.01		N/A			IN/A			IN/A			IN/A	
6		443	4.80		N/A			N/A			N/A			N/A	
7	2	458	4.93		N/A			N/A			N/A			N/A	
8	(219/12)					ı								1	T
9		470	5.14	B30	1.90	0.950	B31	1.82	0.910	B32	1.54	0.770	B27	1.85	0.925
10					-0.336	1.03		-0.340	0.984		-0.297	0.825		-0.350	1.00
11		408	5.06		N/A			N/A			N/A		B28	1.36	0.680
12	3													-0.221	0.715
13	(223/10)	418	5.01		N/A			N/A			N/A			N/A	
14		428	5.01		N/A			N/A			N/A			N/A	
15		443	4.80		N/A			N/A			N/A			N/A	
16															
17	4 (223/12)	4.93		N/A			N/A			N/A			N/A		
18	(223/12)														
19		5.14	N/A			N/A			N/A		B29	1.85	0.925		
20													-0.162	0.960	
-	00 47 OFD 0 4		R LIMITS	anade (	Defets O = 1		BOD	-	_	TIAL PE				RE CATE	
Note	C 47 CFR 2.1	093	Health C	anada S	Safety Cod	ie 6	8.0 W/	kg	1 gra	m avera	ge	Occ	upation	al / Contr	olled
NOTE	:5														

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT						
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Antenna 1

5.9 cm

Phantom = Barski Planar Phantom



Test Report Issue Date

Test Report Serial No. 052813OWD-1235SAR

Rev. 1.0 (1st Release) RF Exposure Category

Test Report Revision No.



Description of Test(s) Jun. 14, 2013 Specific Absorption Rate Occupational (Controlled)

TA	BLE 8			BOD	Y-WOF	RN S	AR E	VALUATIO	N RESU	LTS				
	Dev	/ice-Und	er-Test	XG-25	P UHF-L	Radi	o Trar	nsceiver (Scan	1)					
	Body-worn	Accesso	ory ID#	3 (Add	ditional)									
	Audio	Accesso	ory ID #	G8a (	Default)									
		Test	Date(s)	June 5	5 & 6, 20	12								
С					1	2		3	4	5	6		7	8
			Cond.		SAR W/kg	g 1g		SAR W/k	g 1g	SAR W	kg 1g		SAR W/k	g 1g
R	Antenna Accessory	Test Freq.	Power Before	Batte	ery a (Add	ditiona	ıl)	Battery b (Ad	lditional)	Battery c (A	dditional)	В	attery d ([	Default)
K	ID#	(MHz)	Test	100%	ptt d/f	50% p	tt d/f	100% ptt d/f	50% ptt d/f	100% ptt d/f	50% ptt d/f	1009	% ptt d/f	50% ptt d/f
			(W)	Drift	(dB)	<b>50%</b> +d	lroop	Drift dB	50%+droop	Drift dB	50%+droop	Dr	ift dB	50%+droop
1		408	5.17		N/A			N/A		N//	1	B33	1.44	0.720
2		400	5.17		IV/A			14/74		14//	`	D00	-0.081	0.734
3	1 (219/10)	418	5.07		N/A			N/A		N//	4		N/A	
4	(=10,10)													
5		428	5.09		N/A			N/A		N//	4		N/A	
6		443	4.92		N/A			N/A		N//	4		N/A	
7	7 2 458 4.97 N/A							N/A		N//	4		N/A	
8	8 (219/12) 1.79 0.895													
9		470	5.20	B34	-0.097	0.9	15	N/A		N//	4		N/A	
10		408	5.17		N/A			N/A		N//		B35	1.25	0.625
11	3	400	5.17		IN/A			IN/A		IN//	533	0.625		
12	(223/10)	418	5.07		N/A			N/A		N//	4		N/A	
13		428	5.09		N/A			N/A		N//	4		N/A	
14		443	4.92		N/A			N/A		N//	\		N/A	
15		443	4.92		IN/A			IN/A		14//	٦		IN/A	
16	4 (223/12)	458	4.97		N/A			N/A		N//	4		N/A	
17	(==0, :=)	470	5.20		NI/A			N/A		N//	\	B36	1.56	0.780
18 470 5.20 N/A							IN/A		IN//	1	D30	-0.024	0.784	
	SAR LIMITS							BODY	SPA	ATIAL PEAK	RFE	XPOSU	RE CATE	GORY
	C 47 CFR 2.1	093	Health Ca	anada S	afety Cod	le 6		8.0 W/kg	1 gr	am average	Occ	upation	nal / Contr	olled
Note								Du /D Dail )	\ damat !!		-d. 04D D' 1	4		
	Column; R = F		atad Cantin	2110110 \4/2	avo)			Phantom = B	<u> </u>	e corresponding E	ouy SAK Plot	# as sn	own in Ap	penaix A
	Mode = CW (					ondi	D)				anar Dhantar	m (soo	Annondiy	D)
B	Back of DUT Distance to Planar Phantom (see Appendix D) (Back of Radio Parallel to Planar Phantom)							Antenna	1	Antenna Distance to Planar Phanto Antenna 2 Antenna		•	T .	enna 4
	5.4 cm							5.9 cm		5.9 cm	5.9 cm			9 cm
								1	l					

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT						
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3.2 cm

Date(s) of Evaluation May 30-Jun7, 2013

Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)

Specific Absorption Rate

RF Exposure Category
Occupational (Controlled)

Test Report Revision No.

Rev. 1.0 (1st Release)



TABLE 9 **BODY-WORN SAR EVALUATION RESULTS** XG-25P UHF-L Radio Transceiver (System) **Device-Under-Test Body-worn Accessory ID #** 4 (Additional) Audio Accessory ID # G8a (Default) June 6, 2012 Test Date(s) С 3 Cond. SAR W/kg 1g SAR W/kg 1g SAR W/kg 1g SAR W/kg 1g Test Power **Antenna** Battery c (Additional) Battery a (Additional) Battery b (Additional) Battery d (Default) **Before** Accessory Freq. 50% ptt d/f 100% ptt d/f ID# (MHz) **Test** (W) Drift (dB) Drift dB 50%+droop Drift dB 50%+droop Drift dB 50%+droop 50%+droop 1 1.77 3.54 408 5.06 N/A N/A N/A **B37** 2 -0.4261.95 3 418 5.01 N/A N/A N/A N/A (219/10)4 428 5.01 N/A N/A N/A N/A 5 6 443 4.80 N/A N/A N/A N/A 7 458 4.93 N/A N/A N/A N/A 8 (219/12)9 4.60 2.30 470 5.14 N/A N/A N/A **B38** 10 -0.406 2.53 11 4.17 2.09 408 5.06 N/A N/A N/A **B39** -0.218 2.19 12 (223/10)13 418 5.01 N/A N/A N/A N/A N/A N/A N/A 14 428 5.01 N/A 15 443 4.80 N/A N/A N/A N/A 16 17 458 N/A 4.93 N/A N/A N/A (223/12)18 19 5.34 2.67 5.12 2.56 4.96 2.48 4.82 2.41 470 5.14 B41 B42 B43 B40 2.92 20 -0.235 2.82 -0.571 -0.169 -0.217 2.53 SAR LIMITS **SPATIAL PEAK** RF EXPOSURE CATEGORY **BODY** FCC 47 CFR 2.1093 **Health Canada Safety Code 6** 8.0 W/kg 1 gram average **Occupational / Controlled** Notes C = Column; R = Row Bx (B = Body) denotes the corresponding Body SAR Plot # as shown in Appendix A Test Mode = CW (Unmodulated Continuous Wave) Phantom = Barski Planar Phantom Shortest Antenna Distance to Planar Phantom (see Appendix D) Back of DUT Distance to Planar Phantom (see Appendix D) (Back of Radio Parallel to Planar Phantom) Antenna 1 Antenna 2 Antenna 3 Antenna 4

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS	
DUT Type:	Por	table UHF Band PTT	ble UHF Band PTT Radio Transceiver with Bluetooth DUT Name: XG-25P UHF-L						
2013 Celltech La	ibs Inc.	This document is not to	Page 21 of 182						

3.4 cm

3.4 cm

3.4 cm

3.4 cm



Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)

Specific Absorption Rate

RF Exposure Category
Occupational (Controlled)

Test Report Revision No.

Rev. 1.0 (1st Release)



TAI	BLE 10			BOD	Y-WOI	RN S	AR E	EVALUATIO	N RESUL	.TS				
	Dev	rice-Und	er-Test	XG-25	P UHF-I	L Rad	io Tra	nsceiver (Scar	1)					
	Body-worn	Accesso	ory ID#	4 (Add	ditional)									
	Audio	Accesso	ory ID#	G8a (	Default)									
		Test	Date(s)	June 6	5, 2012									
С				•	1	2	2	3	4	5	6		7	8
			Cond.		SAR W/k			SAR W/k		SAR W/I			SAR W/k	
R	Antenna Accessory	Test Freq.	Power Before	Batte	ery a (Ad	dition	al)	Battery b (Ad	lditional)	Battery c (Ad	dditional)	В	attery d (I	
	ID#	(MHz)	Test	100%	ptt d/f	50% p	ott d/f	100% ptt d/f	50% ptt d/f	100% ptt d/f	50% ptt d/f	100%	% ptt d/f	50% ptt d/f
			(W)	Drift	(dB)	50%+0	droop	Drift dB	50%+droop	Drift dB	50%+droop	Dr	ift dB	50%+droop
1		408	5.17	N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A				N/A		N/A		B44	3.42	1.71
2	4			N/A N/A N/A N/A N/A N/A N/A									-0.270	1.82
3	1 (219/10)	418	5.07		N/A			N/A		N/A			N/A	
4	,	428	5.09		NI/A			N/A		N/A			N/A	
5		420	3.09		IN/A			IN/A		IV/A			IN/A	
6		443	4.92		N/A			N/A		N/A			N/A	
7	2	458	4.97	N/A			N/A		N/A	1		N/A		
8	(219/12)						N/A N/						5.35	2.68
9		470	5.20	N/A			N/A		N/A		B45	-0.168	2.78	
10		408	5.17	N/A			N/A		N/A		B46	3.54	1.77	
11	3	400	3.17		IV/A			IN/A		19/7	D40	0.062	1.77	
12	(223/10)	418	5.07		N/A			N/A		N/A		N/A		
13		428	5.09		N/A			N/A		N/A			N/A	
14		442	4.92		N/A			N/A		N/A			N/A	
15		443	4.92		IN/A			IN/A		N/A			IN/A	
16	4 (223/12)	458	4.97		N/A			N/A		N/A			N/A	
17	(223/12)	470	5.00	D.47	4.68	2.	34	<b>N</b> 1/A		N1/A			N1/A	
18 470 5.20 B47 -0.159 2.43							43	N/A		N/A			N/A	
	SAR LIMITS							BODY	SPA	TIAL PEAK	RF E	XPOSU	RE CATE	GORY
FC	C 47 CFR 2.1	093	Health Ca	anada Sa	afety Cod	le 6		8.0 W/kg	1 gra	ım average	Occ	upation	al / Contr	olled
Note								D (5 5 : :			1 045 51	,,		
	Column; R = R									corresponding Bo	oay SAR Plot	# as sh	own in Ap	pendix A
	Mode = CW (						- D\	Phantom = Barski Planar Phantom				tom (see Annendix D)		D)
Back of DUT Distance to Planar Phantom (see Appendix D) (Back of Radio Parallel to Planar Phantom)							(D)	Antenna	1	Antenna 2	o Planar Phantom (see Appendix D)  Antenna 3 Anten		enna 4	
3.2 cm								3.4 cm		3.4 cm	3.4 cm			4 cm

Subsets of tests were performed for the Scan radio model variant based on re-evaluating the maximum SAR levels per antenna configuration from the System model evaluations.

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	XG-25P UHF-L	
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Test Report Issue Date

Test Report Serial No. 052813OWD-1235SAR

RF Exposure Category

Test Report Revision No.

Rev. 1.0 (1st Release)



Jun. 14, 2013 Specific Absorption Rate

Description of Test(s) Occupational (Controlled)

TAI	BLE 11			BOD	Y-WOF	RN SAF	REVA	LUATIO	N RE	SUL	.TS					
	Dev	rice-Und	er-Test	XG-2	5P UHF-I	L Radio <sup>-</sup>	Transce	iver (Syst	tem)							
	Body-worn	Accesso	ory ID#	6 (Ad	ditional)											
	Audio	Accesso	ory ID #	G8a	(Default)											
		Test	Date(s)	June	7 2012											
С					1	2		3		4		5	6		7	8
			Cond.		SAR W/k			SAR W/kg 1g			SAR W/k			SAR W/k	g 1g	
R	Antenna Accessory	Test Freq.	Power Before		tery a (Ad	ditional)	В	attery b (A	ddition	nal)	Batt	ery c (Ad	dditional)		attery d (I	Default)
	ID#	(MHz)	Test		% ptt d/f	50% ptt c		0% ptt d/f	50%	ptt d/f		ptt d/f	50% ptt d/f		% ptt d/f	50% ptt d/f
			(W)	Dri	ft (dB)	50%+dro	op	Drift dB	50%+	-droop	Dri	ft dB	50%+droop	Dr	ift dB	50%+droop
1		408	5.06		N/A			N/A	A			N/A		B48	2.70 -0.423	1.35
2	1														1.49	
3	(219/10)	418	5.01		N/A			N/A	١			N/A	N/A			
4		428	5.01		N/A			N/A	٨			N/A		N/A		
5																
6		443	4.80		N/A			N/A	4			N/A		N/A		
7	2	458	4.93		N/A			N/A	<b>A</b>			N/A			N/A	
8	(219/12)					1		_				1			1	
9		470	5.14	B52	3.55	1.78	B5	3.64	_	.82	B54	3.23	1.62	B49	3.59	1.80
10					-0.278	1.89		-0.383	1	.99		-0.520	1.82		-0.272	1.91
11		408	5.06		N/A			N/A	A			N/A		B50	2.78	1.39
12	3 (223/10)														-0.187	1.45
13	(223/10)	418	5.01		N/A			N/A				N/A			N/A	
14		428	5.01		N/A			N/A	4			N/A			N/A	
15		443	4.80		N/A			N/A	A			N/A			N/A	
16																
17	4 (223/12)	458	4.93		N/A			N/A	A			N/A			N/A	
18	(223/12)														0.00	1 4 00
19		470	5.14		N/A			N/A	A			N/A		B51	3.38	1.69
20		CAF	LIMITO		BODY SPATIAL PEAK RF E				DEE	VDOCII	-0.207	1.77				
SAR LIMITS FCC 47 CFR 2.1093 Health Canada Safety Code 6							עטץ W/kg			m avera				RE CATE		
Notes							0.0	W/Kg		ı gıa	ili avere	ige	000	ираноп	ar / Contr	Offica
	Column; R = F	Row					В	x (B = Body	/) deno	tes the	corresp	onding Bo	ody SAR Plot	# as sh	own in Ap	pendix A
Test	Test Mode = CW (Unmodulated Continuous Wave)						Phantom = Barski Planar Phantom									
В	ack of DUT D						)	Shortest Antenna Distance to Planar Phantom (see			n (see /	(see Appendix D)				
	(Back of Radio Parallel to Planar Phantom)						Antenna					enna 4				
3.5 cm								3.9 cm			3.9 cm		3.9 cm		3.	9 cm

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	XG-25P UHF-L	
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



TAI	BLE 12			BODY-WOR	N SAR E	EVAL	JATIOI	N RESUL	.TS				
	Dev	ice-Und	er-Test	XG-25P UHF-L	Radio Tra	nsceive	er (Scan	)					
	Body-worn	Accesso	ory ID#	6 (Additional)									
	Audio	Accesso	ory ID #	G8a (Default)									
		Test	Date(s)	June 7, 2012									
С				1	2		3	4	5	6	7		8
			Cond.					SAR W/k	g 1g				
R	Antenna Accessory	Test Freq.	Power Before	Battery a (Add	,	Batt	ery b (Ad		Battery c (Ad	lditional)	В	attery d (D	Default)
, K	ID#	(MHz)	Test	100% ptt d/f	50% ptt d/f	100%	ptt d/f	50% ptt d/f	100% ptt d/f	50% ptt d/f	1009	% ptt d/f	50% ptt d/f
			(W)	Drift (dB)	50%+droop	Drif	ft dB	50%+droop	Drift dB	50%+droop	Dr	ift dB	50%+droop
1		408	5.17	N/A			N/A		N/A		B55	2.82	1.41
2		400	3.17	IN/A			IN/A		IN/A		D33	-0.273	1.50
3	1 (219/10)	418	5.07	N/A			N/A		N/A		N/A		
4	,	400	F 00	NI/A			NI/A		NI/A			NI/A	
5		428	5.09	N/A			N/A		N/A		N/A		
6		443	4.92	N/A			N/A		N/A			N/A	
7	2	458	4.97	N/A			N/A		N/A			N/A	
8	(219/12)	470	<b>-</b> 00	21/2		D.F.0	3.74	1.87				<b></b>	
9		470	5.20	N/A		B56	-0.069	1.90	N/A			N/A	_
10		408	5.17	N/A			N/A		N/A		B57	2.48	1.24
11	3	400	3.17	IV/A			IN/A		IN/A		D37	0.084	1.24
12	(223/10)	418	5.07	N/A			N/A		N/A			N/A	
13		428	5.09	N/A			N/A		N/A			N/A	
14		443	4.92	N/A			N/A		N/A			N/A	
15	4												
16	(223/12)	458	4.97	N/A			N/A		N/A			N/A	1
17		470	5.20	N/A			N/A		N/A	N/A B58 3.60			1.80
18			0.20	1477					1073				1.82
			RLIMITS			BOD	1	SPAT	TIAL PEAK	RF E	XPOSU	RE CATE	GORY
FCC 47 CFR 2.1093 Health Canada Safety Code 6						8.0 W/I	kg	1 gra	m average	Occ	upation	al / Contr	olled
Notes  C = Column; R = Row  Bx (B = Body) denotes the corresponding Bod							dy CAD DI-4	# 00 05	oven in A	andiy ^			
	Mode = CW (		ated Contin	nione Maro)					1 0	Juy SAR PIOT	# as sn	own in App	Deliuix A
	,			•	andiv D\	Phantom = Barski Planar Phantom  D) Shortest Antenna Distance to Planar Phantom (see Appendix D					D)		
В	Back of DUT Distance to Planar Phantom (see Appendix D) (Back of Radio Parallel to Planar Phantom)				Antenna 1 Antenna 2 Antenna 3			` ' ' '					
	•		3.5 cm	•			3.9 cm	,	3.9 cm	3.9 cm			9 cm

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:	3636B-0109		HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	XG-25P UHF-L	
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Test Report Issue Date
Jun. 14, 2013

<u>Test Report Serial No.</u> 052813OWD-1235SAR

<u>Description of Test(s)</u> Specific Absorption Rate

Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



TAI	BLE 13		BODY-WOR	N SAR EVAL	UATION F	RESUL	TS			
IA	BLE 13		REMAINING	DEFAULT A	UDIO ACC	CESSO	RIES BY GF	ROUPING		
	Device	e-Under-Test	XG-25P UHF-L	Radio Transceiv	er (System)					
В	ody-worn Ac	cessory ID #	5 (Default)							
		Test Date(s)	June 7, 2011							
С						1 2				
	Antenna	Battery	Audio	Cond. Power	Test		1g SAR (W	0,		
R	Accessory ID #	Accessory ID #	Accessory ID #	Before Test (W)	Freq. (MHz)	Plot #	100% ptt d/f SAR Drift dB	50% ptt d/f 50%+droop		
1							8.80	4.40		
2			G1a	4.80	443	A1	-0.156	4.56		
3							8.62	4.31		
4			G2a	4.80	443	A2	-0.228	4.54		
5							8.94	4.47		
			G3a	4.80	443	A3	-0.208	4.47		
6										
7	4	а	G6a	4.80	443	A4	8.32	4.16		
8							-0.178	4.33		
9			G4d	4.80	443	A5	9.01	4.51		
10							-0.130	4.64		
11			G5	4.80	443	A6	8.68	4.34		
12					-		-0.149	4.49		
13			G7a	4.80	443	A7	9.36	4.68		
14			O/a	4.00	440	7.07	-0.187	4.89		
Rep	eatability Tes	st per FCC (KI	DB: 447498)							
15	,		07-	4.00	440	4.0	8.12	4.06		
16	4	а	G7a	4.80	443	A8	-0.673	4.74		

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	XG-25P UHF-L	
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)

Specific Absorption Rate

Rev. 1.0 (1st Release)

RF Exposure Category

Occupational (Controlled)

Test Report Revision No.



## 8.0 SAR SCALING (TUNE-UP TOLERANCE)

SCALING	SCALING OF MAXIMUM SAR LEVELS TO MANUFACTURER'S TUNE-UP TOLERANCE SPECIFICATION											
Test Config.	Test Freq. (MHz)	Antenna	Battery	Body-worn Accessory ID #	Cond. Power Drift		SAR Le (50% P		Scaling up to Manuf. Upper Tol.	Scaled SAR (50% PTT d/f) 1g (W/kg)		
	(				Watts	dB	W/kg	Plot #	Power Spec.	· 9 (· · / · · 9)		
FCC (scaled	FCC (scaled without drift)											
Face-Held	470	2	а	N/A	5.14	-0.342	1.90	F5	+0.1 dB	1.94		
Body-worn	443	4	а	5	4.8	-0.187	4.68	A7	+0.4 dB	5.13		
IC (scaled with drift)												
Face-Held	470	2	а	N/A	5.14	-0.342	1.90	F5	+0.1 dB	2.10		

#### Notes:

- 1. Only the highest SAR values for face and body per frequency band are scaled.
- 2. The resulting value is the reported SAR.
- 3. The scaled SAR levels are below the FCC/IC Occupational SAR Limit of 8.0 W/kg.
- 4. Body-worn SAR is the same for FCC and IC, as the drift is less than 5% so the resulting SAR value does not need to be scaled with the drift.

#### 9.0 SIMULTANEOUS TRANSMISSION ASSESSMENT

Co-transmitting Antennas: External UHF (378-470 MHz) and Internal Bluetooth (2402-2480 MHz)

Manuf. Rated Output Power: 1 mW (Bluetooth)

Antenna-to-Antenna Distance: 46.4 mm

	MAX. SAR - UHF-BAND PTT MAX. SAR (50% PTT duty factor) (BLUETOOTH)		SUM OF SAR LEVELS (50% PTT duty factor)	FCC/IC SAR LIMIT (Occupational)
Body-worn	5.13 W/kg (1g)	0.013 W/kg (1g) (Estimated SAR)	5.14 W/kg (1g)	8.0 W/kg (1g)

Simultaneous transmission of the UHF band and Bluetooth was assessed in accordance with the procedures specified in FCC KDB 447498 (see reference [8]). The sum of the highest measured UHF SAR and the estimated Bluetooth SAR are below the limit.

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	ıme:	XG-25P UHF-L	
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)
Test Lab Certification



Test Lab Certificate No. 2470.01

#### 10.0 SAR PROBE CALIBRATION & MEASUREMENT FREQUENCIES

The following procedures are recommended for to minimize probe calibration and tissue dielectric parameter discrepancies. In general, SAR measurements below 300 MHz should be within  $\pm 50$  MHz of the probe calibration frequency. At 300 MHz to 6 GHz, measurements should be within  $\pm 100$  MHz of the probe calibration frequency. Measurements exceeding 50% of these intervals,  $\pm 25$  MHz < 300 MHz and  $\pm 50$  MHz  $\geq 300$  MHz, require additional steps (per FCC KDB 865664 D01v01 - see reference [15]).

Probe Calibration Freq.	Device Measurement Freq.	Frequency Interval	<u>+50</u> MHz ≥ 300 MHz
	408 MHz	42 MHz	< 50 MHz <sup>1</sup>
450 MHz	443 MHz	7 MHz	< 50 MHz <sup>1</sup>
450 WITZ	458 MHz	8 MHz	< 50 MHz <sup>1</sup>
	470 MHz	20 MHz	< 50 MHz <sup>1</sup>

1. The probe calibration and measurement frequency interval is < 50 MHz; therefore the additional steps were not required.

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	XG-25P UHF-L	
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Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)

Specific Absorption Rate

RF Exposure Category

Occupational (Controlled)

Test Report Revision No.

Rev. 1.0 (1st Release)



#### 11.0 DETAILS OF SAR EVALUATION

- 1. The number of test frequencies and the test channels selected for the SAR evaluations are in accordance with the procedures described in FCC KDB 447498 (see reference [8]).
- 2. The DUT was evaluated for SAR in accordance with the procedures described in FCC KDB 643646 (see reference [9]).
- 3. The SAR evaluations were performed with a fully charged battery.
- 4. The SAR drift of the DUT was measured by the DASY4 system for the duration of the SAR evaluations. The measured SAR droop was added to the measured SAR levels to report scaled SAR levels as shown in the SAR test data tables. A SAR-versus-Time power droop evaluation was performed and is shown in Appendix A.
- 5. The fluid temperature remained within +/-2°C from the fluid dielectric parameter measurement to the completion of the SAR evaluation.
- 6. The dielectric parameters of the simulated tissue mixtures were measured prior to the SAR evaluations using a Dielectric Probe Kit and a Network Analyzer (see Appendix C).
- 7. The DUT was evaluated for SAR at the maximum conducted output power level preset by the manufacturer in unmodulated continuous transmit operation (Continuous Wave mode at 100% duty cycle) with the transmit key constantly depressed. For a push-to-talk device the 50% duty cycle compensation reported assumes a transmit/receive cycle of equal time base.
- 8. The Scan radio model differs from the System radio model in front keypad only. The scan radio was evaluated for the worst case configuration of each antenna and head/body test position from the system radio testing.

#### 12.0 SAR EVALUATION PROCEDURES

- a. (i) The evaluation was performed in the applicable area of the phantom depending on the type of device being tested. For devices held to the ear during normal operation, both the left and right ear positions were evaluated using the SAM phantom.
  - (ii) For body-worn and face-held devices, a planar phantom was used.
- b. The SAR was determined by a pre-defined procedure within the DASY4 software. Upon completion of a reference and optical surface check, the exposed region of the phantom was scanned near the inner surface with a grid spacing of 15mm x 15mm.
  - An area scan was determined as follows:
- c. Based on the defined area scan grid, a more detailed grid is created to increase the points by a factor of 10. The interpolation function then evaluates all field values between corresponding measurement points.
- d. A linear search is applied to find all the candidate maxima. Subsequently, all maxima are removed that are >2 dB from the global maximum. The remaining maxima are then used to position the cube scans.
  - A 1g and 10g spatial peak SAR was determined as follows:
- e. Extrapolation is used to find the points between the dipole center of the probe and the surface of the phantom. This data cannot be measured, since the center of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.4 mm (see probe calibration document in Appendix F). The extrapolation was based on trivariate quadratics computed from the previously calculated 3D interpolated points nearest the phantom surface.
- f. Interpolated data is used to calculate the average SAR over 1g and 10g cubes by spatially discretizing the entire measured cube. The volume used to determine the averaged SAR is a 1mm grid (42875 interpolated points).
- g. A zoom scan volume of 30 mm x 30 mm x 30 mm (5 x 5 x 7 points) centered at the peak SAR location determined from the area scan is used for all zoom scans for devices with a transmit frequency < 800 MHz. Zoom scans for frequencies ≥ 800 MHz are determined with a scan volume of 30 mm x 30 mm x 30 mm (7 x 7 x 7) to ensure complete capture of the peak spatial-average SAR.



Test Report Issue Date
Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)
Specific Absorption Rate

Test Report Revision No.
Rev. 1.0 (1st Release)

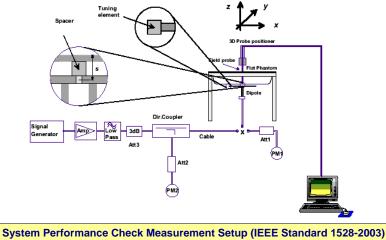
RF Exposure Category
Occupational (Controlled)



#### 13.0 SYSTEM PERFORMANCE CHECK

Prior to the SAR evaluations, system checks were performed with a planar phantom and an 450 MHz SPEAG validation dipole (see Appendix B for system performance check test plots) in accordance with the procedures described in IEEE Standard 1528-2003 (see reference [5]). The dielectric parameters of the simulated tissue mixture were measured prior to the system performance check using a Dielectric Probe Kit and a Network Analyzer (see Appendix C for measured fluid dielectric parameters). A forward power of 398 mW was applied to the dipole and the system was verified to a tolerance of ±10% from the system manufacturer's dipole calibration target SAR value (see Appendix E for system manufacturer's dipole calibration procedures).

				S	SYSTEM	PERF	ORM	ANCE C	HECK	EVAL	UATIO	NS				
Test	Equiv. Tissue	_			Dielec	tric Cons ε <sub>r</sub>	stant		nductivit (mho/m)	•	ρ	Amb. Temp.	Fluid Temp.	Fluid Depth	Humid.	Barom. Press.
Date	Freq. (MHz)	SPEAG Target	Meas.	Dev.	SPEAG Target	Meas.	Dev.	SPEAG Target	Meas.	Dev.	(Kg/m³)	(°C)	(°C)	(cm)	(%)	(kPa)
May 30	Head 450	1.87 ±10%	1.93	+3.2%	43.5 ±5%	45.5	+4.6%	0.87 ±5%	0.88	+1.1%	1000	23.0	21.0	≥ 15	32	101.5
Jun 3	Body 450	1.81 ±10%	1.84	+1.7%	56.7 ±5%	57.4	+1.2%	0.94 ±5%	0.94	0.0%	1000	22.0	21.8	≥ 15	36	101.7
Jun 6	Body 450	1.81 ±10%	1.79	-1.1%	56.7 ±5%	56.5	-0.4%	0.94 ±5%	0.93	-1.1%	1000	22.0	21.9	≥ 15	31	101.3
	1.	The targe	t SAR va	lues are	the measur	ed value	s from the	e SAR syst	em manu	facturer's	s dipole c	alibration (s	ee Apper	ıdix E).		
	2.	The targe	t dielectric	c parame	ters are the	nominal	values fro	om the SAR	system r	manufact	urer's dipo	ole calibration	on (see Ap	pendix E)		
Notes	3.				measured pormance ch			he system	performa	nce chec	k evaluat	ions. The f	luid temp	erature re	mained wit	hin +/-
	4.				of the simulate Appendix		ue mixtur	e were me	asured p	rior to the	e system	performand	e check ι	using a Di	electric Pro	be Kit
			•							•			-	CONTRACTOR DAYS	R. ISNOTESTATION	





**SPEAG 450 MHz Validation Dipole Setup** 

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	ıme:	XG-25P UHF-L	
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Test Report Issue Date Jun. 14, 2013

Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)

RF Exposure Category Specific Absorption Rate Occupational (Controlled)

Test Report Revision No.

Rev. 1.0 (1st Release)



#### 14.0 SIMULATED EQUIVALENT TISSUES

The simulated equivalent tissue recipes in the table below are derived from the SAR system manufacturer's suggested recipes in the DASY4 manual (see references [10] and [11]) in accordance with the procedures and requirements specified in IEEE Standard 1528-2003 (see reference [5]). The ingredient percentage may have been adjusted minimally in order to achieve the appropriate target dielectric parameters within the specified tolerance.

	SIMULATED TISSUE MIXTURES	
INGREDIENT	450 MHz HEAD	450 MHz BODY
Water	38.56 %	52.00 %
Sugar	56.32 %	45.65 %
Salt	3.95 %	1.75 %
HEC	0.98 %	0.50 %
Bactericide	0.19 %	0.10 %

#### 15.0 SAR LIMITS

	SAR RF EXPOSURE LIMITS										
FCC 47 CFR 2.1093	Health Canada Safety Code 6	(General Population / Uncontrolled Exposure)	(Occupational / Controlled Exposure)								
•	ial Average ver the whole body)	0.08 W/kg	0.4 W/kg								
	atial Peak er any 1 g of tissue)	1.6 W/kg	8.0 W/kg								
	atial Peak Inkles averaged over 10 g)	4.0 W/kg	20.0 W/kg								

The Spatial Average value of the SAR averaged over the whole body.

The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.

Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS	
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	XG-25P UHF-L		
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# **16.0 ROBOT SYSTEM SPECIFICATIONS**

<u>Specifications</u>	
Positioner	Stäubli Unimation Corp. Robot Model: RX60L
Repeatability	0.02 mm
No. of axis	6
Data Acquisition Electronic (DAE	) System
Cell Controller	
Processor	AMD Athlon XP 2400+
Clock Speed	2.0 GHz
Operating System	Windows XP Professional
<u>Data Converter</u>	
Features	Signal Amplifier, multiplexer, A/D converter, and control logic
Software	Measurement Software: DASY4, V4.7 Build 80
Software	Postprocessing Software: SEMCAD, V1.8 Build 186
Connecting Lines	Optical downlink for data and status info., Optical uplink for commands and clock
DASY4 Measurement Server	
Function	Real-time data evaluation for field measurements and surface detection
Hardware	PC/104 166MHz Pentium CPU; 32 MB chipdisk; 64 MB RAM
Connections	COM1, COM2, DAE, Robot, Ethernet, Service Interface
E-Field Probe	
Model	ET3DV6
Serial No.	1590
Construction	Triangular core fiber optic detection system
Frequency	10 MHz to 6 GHz
Linearity	±0.2 dB (30 MHz to 3 GHz)
Phantom	
Туре	Barski Planar Phantom
Shell Material	Fiberglass
Thickness	2.0 ±0.1 mm
Volume	Approx. 70 liters

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	me:	XG-25P UHF-L	
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Specific Absorption Rate

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RF Exposure Category

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Test Report Revision No.



## 17.0 PROBE SPECIFICATION (ET3DV6)

Construction: Symmetrical design with triangular core;

Built-in shielding against static charges

PEEK enclosure material (resistant to organic solvents, glycol)

Calibration: In air from 10 MHz to 2.5 GHz

In head simulating tissue at frequencies of 900 MHz

and 1.8 GHz (accuracy  $\pm$  8%)

Frequency: 10 MHz to > 6 GHz; Linearity:  $\pm$  0.2 dB (30 MHz to 3 GHz) Directivity:  $\pm$  0.2 dB in head tissue (rotation around probe axis)

± 0.4 dB in head tissue (rotation normal to probe axis)

Dynamic Range:  $5 \mu W/g$  to > 100 mW/g; Linearity:  $\pm$  0.2 dB

Surface Detect:  $\pm$  0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces

Dimensions: Overall length: 330 mm; Tip length: 16 mm;

Body diameter: 12 mm; Tip diameter: 6.8 mm Distance from probe tip to dipole centers: 2.7 mm

Application: General dosimetry up to 3 GHz; Compliance tests of mobile phone



**ET3DV6 E-Field Probe** 

## 18.0 PHANTOM(S)

The Barski Planar Phantom is a fiberglass shell phantom with a 2.0 mm (+/-0.2mm) thick device measurement area at the center of the phantom for SAR evaluations of devices with a larger surface area than the planar section of the SAM phantom. The planar phantom is integrated in a wooden table. The planar phantom is used for SAR evaluations and system performance check evaluations. See Appendix G for dimensions and specifications of the Barski planar phantom.



**Barski Planar Phantom** 

#### 19.0 DEVICE HOLDER

The DASY4 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65°. The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections.



**Device Holder** 

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	ime:		
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RF Exposure Category



# **20.0 TEST EQUIPMENT LIST**

	TEST EQUIPMENT	ASSET NO.	SERIAL NO.	DATE	CALIBRATION
USED	DESCRIPTION	AGGET NO.	OLIVIAL NO.	CALIBRATED	INTERVAL
х	Schmid & Partner DASY4 System	-	-	-	-
х	-DASY4 Measurement Server	00158	1078	CNR	CNR
х	-Robot	00046	599396-01	CNR	CNR
х	-DAE4	00019	353	19-Apr-12	Biennial
х	-ET3DV6 E-Field Probe	00017	1590	24-Apr-13	Annual
х	-D450V3 Validation Dipole	00221	1068	27-Apr-12	Triennial
х	-Barski Planar Phantom	00155	03-01	CNR	CNR
х	HP 85070C Dielectric Probe Kit	00033	none	CNR	CNR
х	Gigatronics 8652A Power Meter	00007	1835272	03-May-12	Biennial
х	Gigatronics 80701A Power Sensor	00014	1833542	03-May-12	Biennial
х	Gigatronics 80334A Power Sensor	-	1837001	03-May-12	Biennial
х	HP 8753ET Network Analyzer	00134	US39170292	26-Apr-12	Biennial
х	Rohde & Schwarz SMR20 Signal Generator	00006	100104	02-May-12	Biennial
х	Amplifier Research 5S1G4 Power Amplifier	00106	26235	CNR	CNR
Abbr.	CNR = Calibration Not Required				

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	ıme:	XG-25P UHF-L	
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## 21.0 MEASUREMENT UNCERTAINTIES

UNCERT	AINTY BU	JDGET FOR	DEVICE EV	ALUATION (	IEC 6	2209-2	2:2010)		
Source of Uncertainty	IEC 62209-2 Section	Tolerance / Uncertainty ±%	Probability Distribution	Divisor	ci 1g	ci 10g	Standard Uncertainty ±% (1g)	Standard Uncertainty ±% (10g)	V <sub>i</sub> or V <sub>eff</sub>
Measurement System									
Probe Calibration (450 MHz)	7.2.2.1	6.7	Normal	1	1	1	6.7	6.7	∞
Isotropy	7.2.2.2	4.7	Rectangular	1.732050808	1	1	2.7	2.7	$\infty$
Boundary Effect	7.2.2.6	1	Rectangular	1.732050808	1	1	0.6	0.6	$\infty$
Linearity	7.2.2.3	4.7	Rectangular	1.732050808	1	1	2.7	2.7	∞
Detection Limits	7.2.2.5	1	Rectangular	1.732050808	1	1	0.6	0.6	$\infty$
Readout Electronics	7.2.2.7	0.3	Normal	1	1	1	0.3	0.3	$\infty$
Response Time	7.2.2.8	0.8	Rectangular	1.732050808	1	1	0.5	0.5	$\infty$
Integration Time	7.2.2.9	2.6	Rectangular	1.732050808	1	1	1.5	1.5	$\infty$
RF Ambient Conditions	7.2.4.5	3	Rectangular	1.732050808	1	1	1.7	1.7	$\infty$
Probe Positioner Mechanical Restrictions	7.2.3.1	0.4	Rectangular	1.732050808	1	1	0.2	0.2	∞
Probe Positioning wrt Phantom Shell	7.2.3.3	2.9	Rectangular	1.732050808	1	1	1.7	1.7	$\infty$
Post-processing	7.2.5	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Test Sample Related									
Test Sample Positioning	7.2.3.4.3	2.9	Normal	1	1	1	2.9	2.9	12
Device Holder Uncertainty	7.2.3.4.2	3.6	Normal	1	1	1	3.6	3.6	8
Drift of Output Power (meas. SAR drift)	7.2.2.10	0	Rectangular	1.732050808	1	1	0.0	0.0	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	7.2.3.2	4	Rectangular	1.732050808	1	1	2.3	2.3	8
SAR Correction Algorithm for deviations in permittivity and conductivity	7.2.4.3	1.2	Normal	1	1	0.81	1.2	0.97	8
Liquid Conductivity (measured)	7.2.4.3	4.26	Normal	1	0.78	0.71	3.3	3.0	∞
Liquid Permittivity (measured)	7.2.4.3	5.06	Normal	1	0.23	0.26	1.2	1.3	∞
Liquid Permittivity - temp. uncertainty	7.2.4.4	0.27	Rectangular	1.732050808	0.78	0.71	0.1	0.1	∞
Liquid Conductivity - temp. uncertainty	7.2.4.4	0.84	Rectangular	1.732050808	0.73	0.26	0.1	0.1	∞
Combined Standard Uncertainty	7.3.1	0.04	RSS	1.732030000	0.23	0.20	10.47	10.37	8
Combined Grandard Officertainty	7.5.1		NOO				10.47	10.01	
Expanded Uncertainty (95% Confidence Interval)	7.3.2		k=2				20.94	20.74	
Measuremen	t Uncertain	ty Table in acc	ordance with Ir	nternational Sta	ndard I	EC 622	09-2:2010		

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Por	table UHF Band PTT	Radio Trans	ceiver with Bluetooth	DUT Na	ıme:	XG-25P UHF-L	
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Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



#### 22.0 REFERENCES

- [1] Federal Communications Commission "Radiofrequency radiation exposure evaluation: portable devices", Rule Part 47 CFR §2.1093.
- [2] Health Canada "Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz", Safety Code 6: 1999.
- [3] Federal Communications Commission "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields", OET Bulletin 65, Supplement C (Edition 01-01), FCC, Washington, D.C.: June 2001.
- [4] Industry Canada "Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)", Radio Standards Specification RSS-102 Issue 4: March 2010.
- [5] IEEE Standard 1528-2003 "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques": December 2003.
- [6] International Standard IEC 62209-2 Edition 1.0 2010-03 "Human exposure to radio frequency fields from hand-held & body-mounted wireless communication devices Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)".
- [7] IEC International Standard 62209-1:2005 "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices Human models, instrumentation, and procedures."
- [8] Federal Communications Commission, Office of Engineering and Technology "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies"; KDB 447498 D01v05r01: May 2013.
- [9] Federal Communications Commission, Office of Engineering and Technology "SAR Test Reduction Considerations for Occupational PTT Radios", KDB 643646 D01v01r01: April 2011.
- [10] Schmid & Partner Engineering AG DASY4 Manual V4.6, Chapter 16 Application Note, Head Tissue Recipe: Sept. 2005.
- [11] Schmid & Partner Engineering AG DASY4 Manual V4.6, Chapter 17 Application Note, Body Tissue Recipe: Sept. 2005.
- [12] ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:2005)."
- [13] Federal Communications Commission "Measurements Required: RF Power Output"; Rule Part 47 CFR §2.1046.
- [14] Industry Canada "General Requirements and Information for the Certification of Radiocommunication Equipment", Radio Standards Specification RSS-Gen Issue 3: December 2010.
- [15] Federal Communications Commission, Office of Engineering and Technology "SAR Measurement Requirements for 100 MHz to 6 GHz"; KDB 865664 D01v01r01: May 2013.



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# **APPENDIX A - SAR MEASUREMENT PLOTS**

Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:	3636B-0109		HARRIS
DUT Type:	Portable UHF Band PTT Radio Transceiver with Bluetooth				DUT Na	DUT Name: XG-25P UHF-L		
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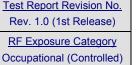
Test Report Issue Date
Jun. 14, 2013

# Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)

Specific Absorption Rate

Occup





#### Plot F1

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 25

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 408 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): f = 408 MHz;  $\sigma = 0.836$  mho/m;  $\varepsilon_r = 45.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

408 - Li-poly - 1219/10/Area Scan (7x24x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (measured) = 3.22 mW/g

408 - Li-poly - 1219/10/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

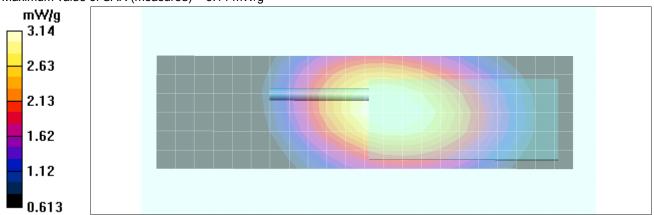
Reference Value = 62.6 V/m; Power Drift = -0.307 dB

Peak SAR (extrapolated) = 4.05 W/kg

SAR(1 g) = 3.01 mW/g; SAR(10 g) = 2.27 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 3.14 mW/g





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Specific Absorption Rate

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RF Exposure Category

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### Plot F2

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 25

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 470 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma = 0.89$  mho/m;  $\varepsilon_r = 44.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

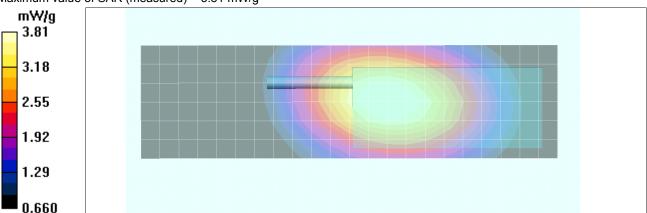
**470 - Li-poly - 1219/12/Area Scan (7x24x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 3.93 mW/g

470 - Li-poly - 1219/12/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 64.7 V/m; Power Drift = -0.339 dB

Peak SAR (extrapolated) = 4.95 W/kg

SAR(1 g) = 3.63 mW/g; SAR(10 g) = 2.7 mW/g Maximum value of SAR (measured) = 3.81 mW/g





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Description of Test(s)

Specific Absorption Rate

RF Exposure Category
Occupational (Controlled)

Test Report Revision No.

Rev. 1.0 (1st Release)



### Plot F3

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 25

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 408 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): f = 408 MHz;  $\sigma$  = 0.836 mho/m;  $\epsilon_r$  = 45.7;  $\rho$  = 1000 kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

#### 408 - Li-poly - 1223/10/Area Scan (7x24x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (measured) = 2.76 mW/g

408 - Li-poly - 1223/10/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

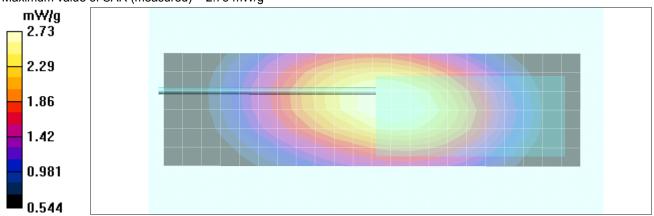
Reference Value = 57.7 V/m; Power Drift = -0.140 dB

Peak SAR (extrapolated) = 3.52 W/kg

SAR(1 g) = 2.62 mW/g; SAR(10 g) = 1.98 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 2.73 mW/g





Test Report Issue Date
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Description of Test(s)

Specific Absorption Rate

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RF Exposure Category

Occupational (Controlled)

Test Report Revision No.



### Plot F4

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 25

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 470 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma = 0.89$  mho/m;  $\varepsilon_r = 44.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

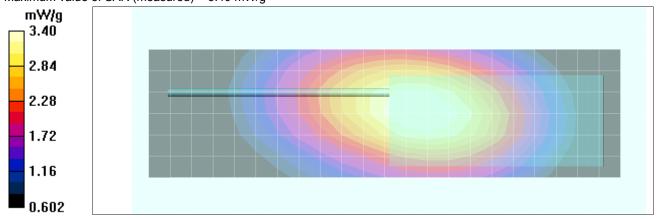
**470 - Li-poly - 1223/12/Area Scan (7x24x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 3.47 mW/g

470 - Li-poly - 1223/12/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 61.6 V/m; Power Drift = -0.190 dB

Peak SAR (extrapolated) = 4.42 W/kg

SAR(1 g) = 3.26 mW/g; SAR(10 g) = 2.43 mW/g Maximum value of SAR (measured) = 3.40 mW/g





Test Report Issue Date
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# Test Report Serial No. 052813OWD-1235SAR

Description of Test(s)

Specific Absorption Rate

RF Exposure Category
Occupational (Controlled)

Test Report Revision No.

Rev. 1.0 (1st Release)



### Plot F5

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 25

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 470 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 44.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

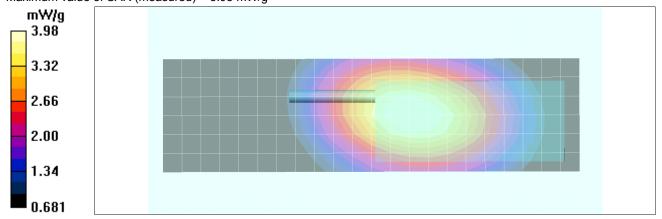
**470 - NiMH NIS - 1219/12/Area Scan (7x24x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 4.06 mW/g

470 - NiMH NIS - 1219/12/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 65.7 V/m; Power Drift = -0.342 dB

Peak SAR (extrapolated) = 5.16 W/kg

SAR(1 g) = 3.79 mW/g; SAR(10 g) = 2.82 mW/g Maximum value of SAR (measured) = 3.98 mW/g





Test Report Issue Date
Jun. 14, 2013

# Test Report Serial No. 052813OWD-1235SAR

Description of Test(s) RF
Specific Absorption Rate Occ

Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



### Plot F6

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 25

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 470 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma$  = 0.89 mho/m;  $\epsilon_r$  = 44.7;  $\rho$  = 1000 kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

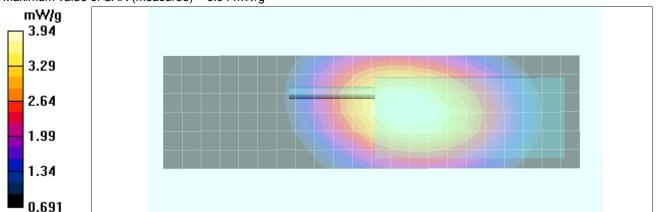
**470 - NiMH IS - 1219/12/Area Scan (7x24x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 4.02 mW/g

470 - NiMH IS - 1219/12/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 65.6 V/m; Power Drift = -0.276 dB

Peak SAR (extrapolated) = 5.11 W/kg

SAR(1 g) = 3.76 mW/g; SAR(10 g) = 2.8 mW/g Maximum value of SAR (measured) = 3.94 mW/g





Test Report Issue Date Jun. 14, 2013

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Description of Test(s) RF Exposure Category Specific Absorption Rate Occupational (Controlled)

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Plot F7

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 25

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 470 MHz: Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma$  = 0.89 mho/m;  $\epsilon_r$  = 44.7;  $\rho$  = 1000 kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

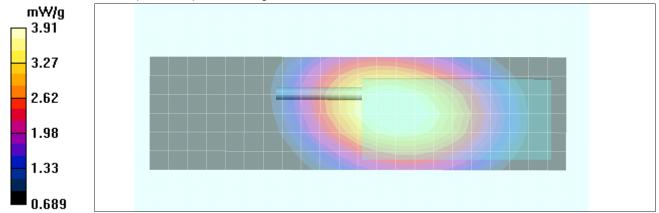
470 - Li-ion - 1219/12/Area Scan (7x24x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 4.08 mW/g

470 - Li-ion - 1219/12/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 66.3 V/m; Power Drift = -0.450 dB

Peak SAR (extrapolated) = 5.07 W/kg

SAR(1 g) = 3.74 mW/g; SAR(10 g) = 2.8 mW/gMaximum value of SAR (measured) = 3.91 mW/g





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Test Report Revision No.

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Test Lab Certificate No. 2470.01

#### Plot F8

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 50

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 408 MHz: Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): f = 408 MHz;  $\sigma = 0.836 \text{ mho/m}$ ;  $\epsilon_r = 45.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SCAN - 408 - Li-poly - 1219/10/Area Scan (7x24x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 3.27 mW/g

SCAN - 408 - Li-poly - 1219/10/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

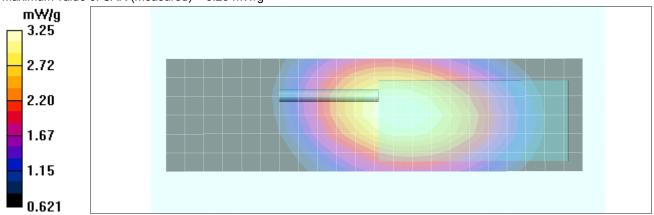
Reference Value = 63.0 V/m; Power Drift = -0.231 dB

Peak SAR (extrapolated) = 4.18 W/kg

SAR(1 g) = 3.11 mW/g; SAR(10 g) = 2.34 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 3.25 mW/g





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Description of Test(s)

Specific Absorption Rate

RF Exposure Category
Occupational (Controlled)

Test Report Revision No.

Rev. 1.0 (1st Release)



### Plot F9

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 50

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 470 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma = 0.89$  mho/m;  $\varepsilon_r = 44.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

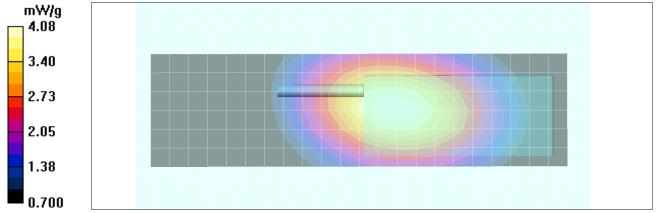
- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SCAN - 470 - NiMH NIS - 1219/12/Area Scan (7x24x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 4.08 mW/g

SCAN - 470 - NiMH NIS - 1219/12/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 66.0 V/m; Power Drift = -0.142 dB

Peak SAR (extrapolated) = 5.28 W/kg

SAR(1 g) = 3.86 mW/g; SAR(10 g) = 2.88 mW/g





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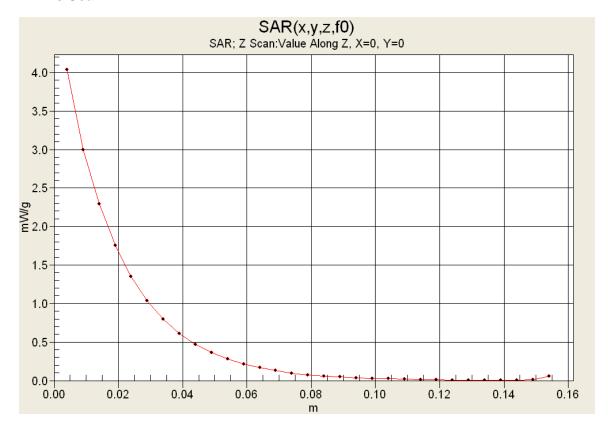
<u>Description of Test(s)</u> Specific Absorption Rate

Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



## **Z-Axis Scan**



Applicant:	HAF	RRIS Corporation	FCC ID:	OWDTR-0109-E	IC:		3636B-0109	HARRIS
DUT Type:	Portable UHF Band PTT Radio Transceiver with Bluetooth				DUT Name: XG-25P UHF-L		,	
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Description of Test(s)

RF Exposure Category Specific Absorption Rate



Test Report Revision No.



Plot F10

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 50

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 408 MHz: Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): f = 408 MHz;  $\sigma = 0.836 \text{ mho/m}$ ;  $\epsilon_r = 45.7$ ;  $\rho = 1000 \text{ kg/m}^3$ 

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SCAN - 408 - Li-poly - 1223/10/Area Scan (7x24x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 2.74 mW/g

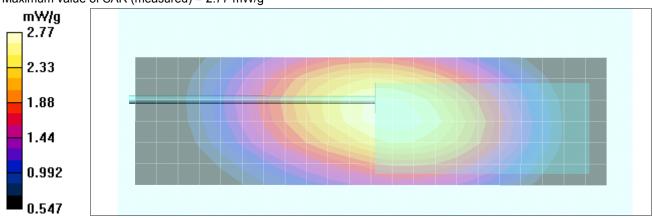
SCAN - 408 - Li-poly - 1223/10/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 57.4 V/m; Power Drift = -0.068 dB

Peak SAR (extrapolated) = 3.56 W/kg

SAR(1 g) = 2.66 mW/g; SAR(10 g) = 2.01 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 2.77 mW/g





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## <u>Test Report Serial No.</u> 052813OWD-1235SAR

Description of Test(s)

Specific Absorption Rate

October

Test Report Revision No.
Rev. 1.0 (1st Release)

RF Exposure Category
Occupational (Controlled)



#### Plot F11

Date Tested: 05/31/2013

DUT: Harris XG-25P; Type: UHF-L PTT Radio Transceiver; Serial: 50

Program Notes: Ambient Temp: 22C; Fluid Temp: 22.0C; Barometric Pressure: 102.5 kPa; Humidity: 32%

Communication System: UHF-L Frequency: 470 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma$  = 0.89 mho/m;  $\epsilon_r$  = 44.7;  $\rho$  = 1000 kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.53, 7.53, 7.53); Calibrated: 24/04/2013
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SCAN - 470 - Li-Poly - 1223/12/Area Scan (7x24x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (measured) = 3.52 mW/g

SCAN - 470 - Li-Poly - 1223/12/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 61.1 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 4.61 W/kg

SAR(1 g) = 3.39 mW/g; SAR(10 g) = 2.52 mW/g Maximum value of SAR (measured) = 3.55 mW/g

