

Federal Communication Commission
Equipment Authorization Division,
Application Processing Branch
7435 Oakland Mills Road
Columbia, MD 21048

**Phonak Communications
AG**

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May 22, 2013

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

Herewith we confirm that the transmitter emissions from the products:

FCC ID Number
KWCDRX

Trade Name/Model
**Roger X, Roger 10, Roger 11,
Roger 13, Roger 15, Roger 16**

are in compliance with the exposure limits for maximum permissible exposure specified in §1.1310, §1.1307(b)(1) and (2), §2.1093(c) of 47 C.F.R. and are categorically excluded from routine RF evaluation. Furthermore, according to section 4.3.1 of the FCC guidance for RF exposure evaluation of mobile and portable devices (KDB publication 447498 D01 General RF exposure guidance) standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or simulation, is not required when the corresponding SAR Exclusion Threshold condition is satisfied. The above mentioned products, which are subject to this Equipment Authorization Filing, are portable devices as defined in §2.1093(b) of 47 CFR, operate in the frequency range 2.402-2.481 GHz with maximum conducted output power 0.016 mW (conducted power measurement results are enclosed as excerpt from Report No: 13-MO-0051.10 issued by Montena EMC on March 19, 2013). Following the formula in section 4.3.1 (1) for the range 100 MHz to 6 GHz and using the most conservative separation distance of 5 mm we obtain a result of 0.005 which is 600 times lower than the 1-g SAR test exclusion threshold. Therefore, the above mentioned products qualify for SAR test exclusion and in lieu of SAR report we are submitting this statement of justification and compliance.

Should you have further questions, please do not hesitate to contact us.

Sincerely,

Neviana Nikoloski
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8.2 Effective radiated power (conducted)

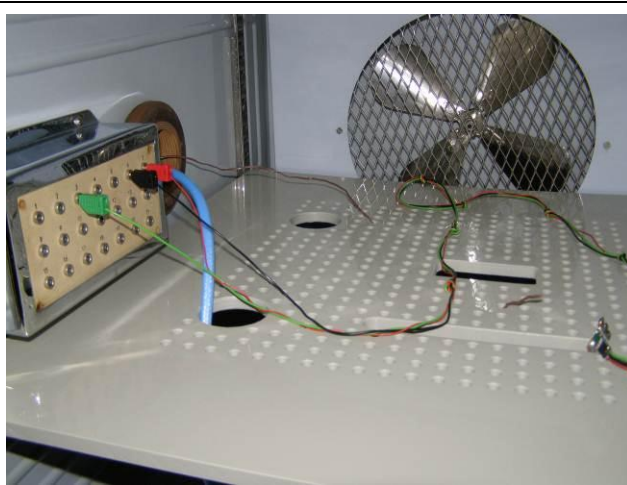
Introduction: The effective radiated power is the power radiated by the antenna of an interrogator in its direction of maximum gain under specified conditions of measurement.
For EUT's with integral antenna the variations of the conducted power under extreme conditions are measured and expressed relatively to the measurements of the radiated measurement.

Test site: ☐ anechoic chamber (foam) ☐ open test site
☐ anechoic chamber (ferrites) ☒ laboratory

Meas. uncertainty: 9 kHz – 3 GHz: ± 1 dB
3 GHz – 6.7 GHz: ± 2.1 dB
6.7 GHz – 13.2 GHz: ± 2.6 dB
13.2 GHz – 19 GHz: ± 2.8 dB
19 GHz – 26.5 GHz: ± 3 dB

Test method: Measurement of the conducted power on the antenna connector or a test fixture.

Test set-up:



Remarks: - - -

Test equipment:

Spectrum analyser	<input type="checkbox"/> 88-14	<input checked="" type="checkbox"/> 02-06	<input type="checkbox"/> 03-45	<input type="checkbox"/> 05-39	<input type="checkbox"/> 07-53	<input type="checkbox"/> 10-70	
HF-wattmeter	<input checked="" type="checkbox"/> 95-97	<input type="checkbox"/> 01-15	<input type="checkbox"/> 01-17	<input type="checkbox"/> 03-12	<input type="checkbox"/> 04-96	<input type="checkbox"/> 05-20	<input type="checkbox"/> 05-73
Thermocouple detector	<input checked="" type="checkbox"/> 92-03 <input type="checkbox"/> 10-28	<input type="checkbox"/> 05-74	<input type="checkbox"/> 05-88	<input type="checkbox"/> 07-03	<input type="checkbox"/> 09-03	<input type="checkbox"/> 09-04	<input type="checkbox"/> 10-27
Diode detector	<input type="checkbox"/> 99-26	<input type="checkbox"/> 99-27					
Oscilloscope	<input type="checkbox"/> 90-14 <input type="checkbox"/> 05-28	<input type="checkbox"/> 93-85 <input type="checkbox"/> 05-44	<input type="checkbox"/> 93-86 <input type="checkbox"/> 06-46	<input type="checkbox"/> 01-20 <input type="checkbox"/> 06-64	<input type="checkbox"/> 04-06	<input type="checkbox"/> 04-50	<input type="checkbox"/> 05-22
Multimeter	<input checked="" type="checkbox"/> 08-17 <input type="checkbox"/> 04-47	<input type="checkbox"/> 90-38 <input type="checkbox"/> 04-104	<input type="checkbox"/> 92-25 <input type="checkbox"/> 04-105	<input type="checkbox"/> 94-51 <input type="checkbox"/> 06-51	<input type="checkbox"/> 95-93 <input type="checkbox"/> 06-52	<input type="checkbox"/> 02-03 <input checked="" type="checkbox"/> 05-46	<input type="checkbox"/> 03-22
Power supply	<input type="checkbox"/> 99-04	<input checked="" type="checkbox"/> 99-07	<input checked="" type="checkbox"/> 06-62				
Temperature chamber	<input checked="" type="checkbox"/> 06-66						
Temperature probe	<input type="checkbox"/> 91-11	<input type="checkbox"/> 03-05	<input type="checkbox"/> 05-34	<input checked="" type="checkbox"/> 08-03			
Frequency generator	<input type="checkbox"/> 88-23	<input type="checkbox"/> 00-42	<input type="checkbox"/> 03-39	<input type="checkbox"/> 04-03	<input type="checkbox"/> 04-89	<input type="checkbox"/> 05-78	<input type="checkbox"/> 07-02
Attenuator	<input type="checkbox"/> Weinschel						
Variable transformer	<input type="checkbox"/> 75-04						
Cables	<input type="checkbox"/> 06-00	<input type="checkbox"/> 06-01	<input checked="" type="checkbox"/> 11-45				

Result: ☒ pass ☐ fail ☐ not applicable ☐ not tested

Results of the testClient: *Phonak Communications AG*Equipment: *D-Receivers*Operating mode: *Max. power, special communication test mode, modulated**T_{on} = 0.184ms; T = 5.41 ms*Cables connected: *- - -*

Remarks: *Referenced to the effective radiated power under normal conditions (see § 8.1)*
Measured on temporary antenna connector with power-meter.
External power supply on temporary battery connector and 2.1VDC "amplifier aid" supply

Temp [C]	U [VDC]	f [GHz]	Duty cycle x [%]	Average power A [dBm]	EIRP calculated		Limit [dBm]	Pass	
					[dBm]	[mW]		Yes	No
22	1.20	2.402	3.4	-16.90	-20.75*	0.008	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22	1.20	2.440	3.4	-16.78	-18.05*	0.016	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22	1.20	2.480	3.4	-17.00	-18.65*	0.014	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-10	1.00	2.402	3.4	-15.99	-19.84	0.010	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-10	1.50	2.402	3.4	-16.00	-17.27	0.019	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-10	1.00	2.440	3.4	-15.66	-17.31	0.019	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-10	1.50	2.440	3.4	-15.69	-20.45	0.009	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-10	1.00	2.480	3.4	-15.58	-17.63	0.017	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-10	1.50	2.480	3.4	-15.59	-18.58	0.014	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	1.00	2.402	3.4	-18.28	-23.34	0.005	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	1.50	2.402	3.4	-18.31	-20.78	0.008	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	1.00	2.440	3.4	-18.15	-21.21	0.008	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	1.50	2.440	3.4	-18.13	-20.60	0.009	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	1.00	2.480	3.4	-18.16	-17.90	0.016	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60	1.50	2.480	3.4	-18.21	-18.71	0.013	-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>

* values taken from § 8.1

Place and date of test:
Operator:

Rossens, January 29-20, 2013
B. Itzcovich