

Microphone Test Report No.:30416

Manufacturer: Rion
Type: UC-59
Serial no: 04427

Customer: Scantek, Inc.
Address: 6430 Dobbin Rd., Suite C, Columbia MD, 21045
Contact Person: Mariana Buzduga
Phone No.: 410-290-7726
Fax No.: 410-290-9167
eMail: info@scantekinc.com

Measurement Results:

Sensitivity:
(dB re 1V/Pa)

1:	-27.08
2:	-27.09
3:	-27.09

Result (Average): -27.09
Expanded Uncertainty: 0.12
Degree of Freedom: >100
Coverage Factor: 2.00

The following correction factors have been applied during the measurement:
Pressure:0.000 dB/kPa Temperature:0.000 dB/°C Relative humidity:0.000 dB/%RH

Reference Calibrator: WSC1 - Nor1253-22909 Volume correction: 0.000 dB
Records:Z:\Calibration Lab\Mic 2014\Rion59_04427_M1.nmf

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA publication EA-4/02.

Comment:

Environmental conditions:

Pressure:	Temperature:	Relative humidity:
101.500 ± 0.001 kPa	23.6 ± 1.0 °C	32.5 ± 2.0 %RH

Date of calibration: 1/30/2014
Date of issue: 2/7/2014

Supervisor : Valentin Buzduga
Measurements performed by:

Rion / UC-59 / 04427 / 30416

Numerical table of frequency response

Actuator (pressure)		Actuator (pressure)	
Freq. (Hz)	Resp. (dB)	Freq. (Hz)	Resp. (dB)
50.1	0.1	17782.8	-12.4
56.2	0.1	19952.6	-14.3
63.1	0.1		
70.8	0.1		
79.4	0.1		
89.1	0.1		
100.0	0.1		
112.2	0.1		
125.9	0.1		
141.3	0.1		
158.5	0.1		
177.8	0.1		
199.5	0.1		
223.9	0.1		
251.2	0.0		
281.8	0.0		
316.2	0.0		
354.8	0.0		
398.1	0.0		
446.7	0.0		
501.2	0.0		
562.3	0.0		
631.0	0.0		
707.9	0.0		
794.3	0.0		
891.3	-0.1		
1000.0	0.0		
1122.0	-0.1		
1258.9	-0.1		
1412.5	-0.1		
1584.9	-0.1		
1778.3	-0.2		
1995.3	-0.2		
2238.7	-0.3		
2511.9	-0.4		
2818.4	-0.5		
3162.3	-0.5		
3548.1	-0.7		
3981.1	-0.8		
4466.8	-1.0		
5011.9	-1.3		
5623.4	-1.6		
6309.6	-2.1		
7079.5	-2.7		
7943.3	-3.5		
8912.5	-4.5		
10000.0	-5.8		
11220.2	-7.1		
12589.3	-8.3		
14125.4	-9.5		
15848.9	-10.8		

Informative Frequency Response

Frequency (Hz)	Actuator Response (dB)	Diffuse field (dB)	Free field (dB)
50	0.1	0.1	0.1
63	0.1	0.1	0.1
80	0.1	0.1	0.1
100	0.1	0.1	0.1
125	0.1	0.1	0.1
160	0.1	0.1	0.1
200	0.1	0.1	0.1
250	0.0	0.0	0.0
315	0.0	0.0	0.0
400	0.0	0.0	0.0
500	0.0	0.0	0.0
630	0.0	0.0	-0.1
800	0.0	0.0	-0.1
1000	0.0	0.0	0.0
1250	-0.1	-0.1	0.0
1600	-0.1	-0.1	0.0
2.0 k	-0.2	-0.2	0.0
2.5 k	-0.4	-0.4	0.0
3.15 k	-0.5	-0.5	0.0
4.0 k	-0.8	-0.8	0.1
5.0 k	-1.3	-1.3	0.1
6.3 k	-2.1	-2.1	-0.1
8.0 k	-3.5	-3.5	-0.4
10 k	-5.8	-5.8	-0.5
12.5 k	-8.3	-8.3	-1.1
16 k	-10.8	-10.8	-1.9
20 k	-14.3	-14.3	-3.2

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Sensitivity: 44.22 mV/Pa
-27.09 ±0.12 dB re. 1 V/Pa

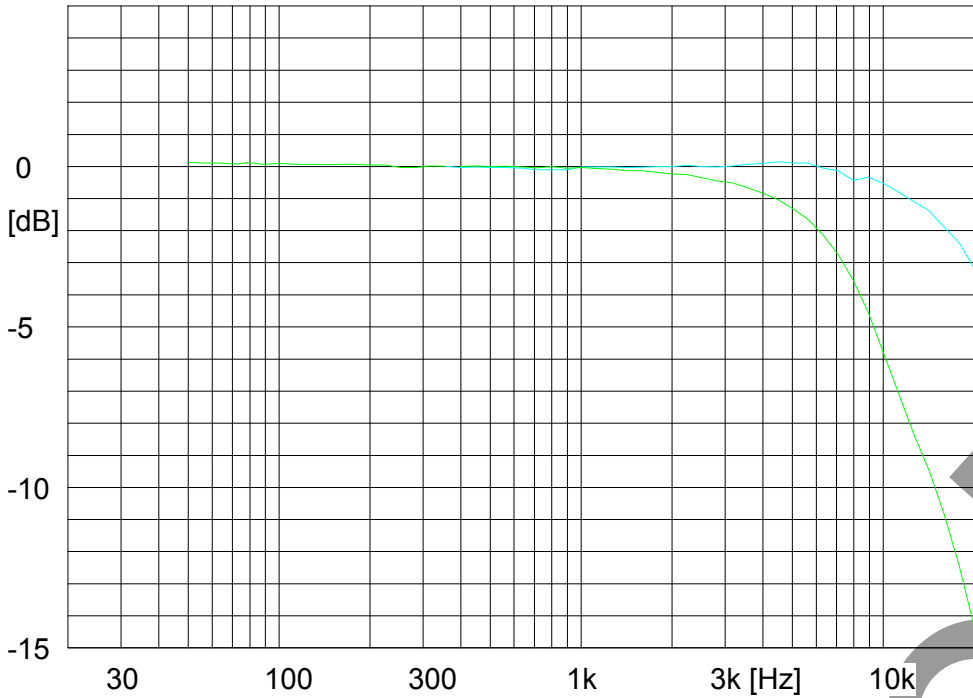
Date: 1/30/2014

Signature: _____

Measurement conditions:
Polarisation voltage: 0.0 V
Pressure: 101.50 ±0.00 kPa
Temperature: 23.6 ±1.0 °C
Relative humidity: 32.5 ±2.0 %RH
Results are normalized to the measurement conditions.

Free field response
Actuator response

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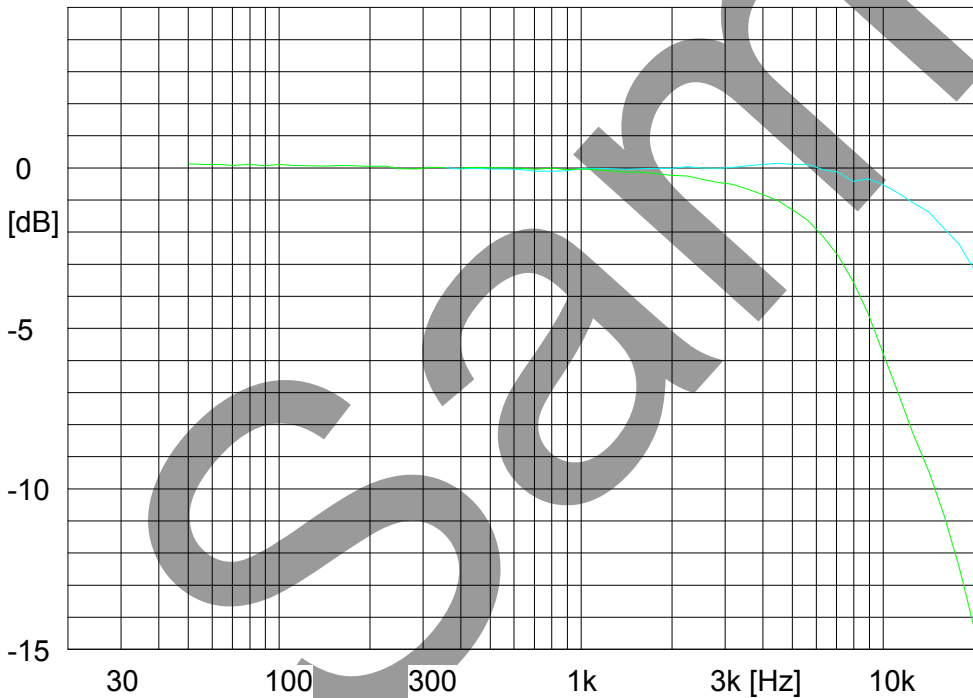
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Comment:

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