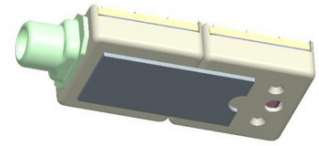


Description

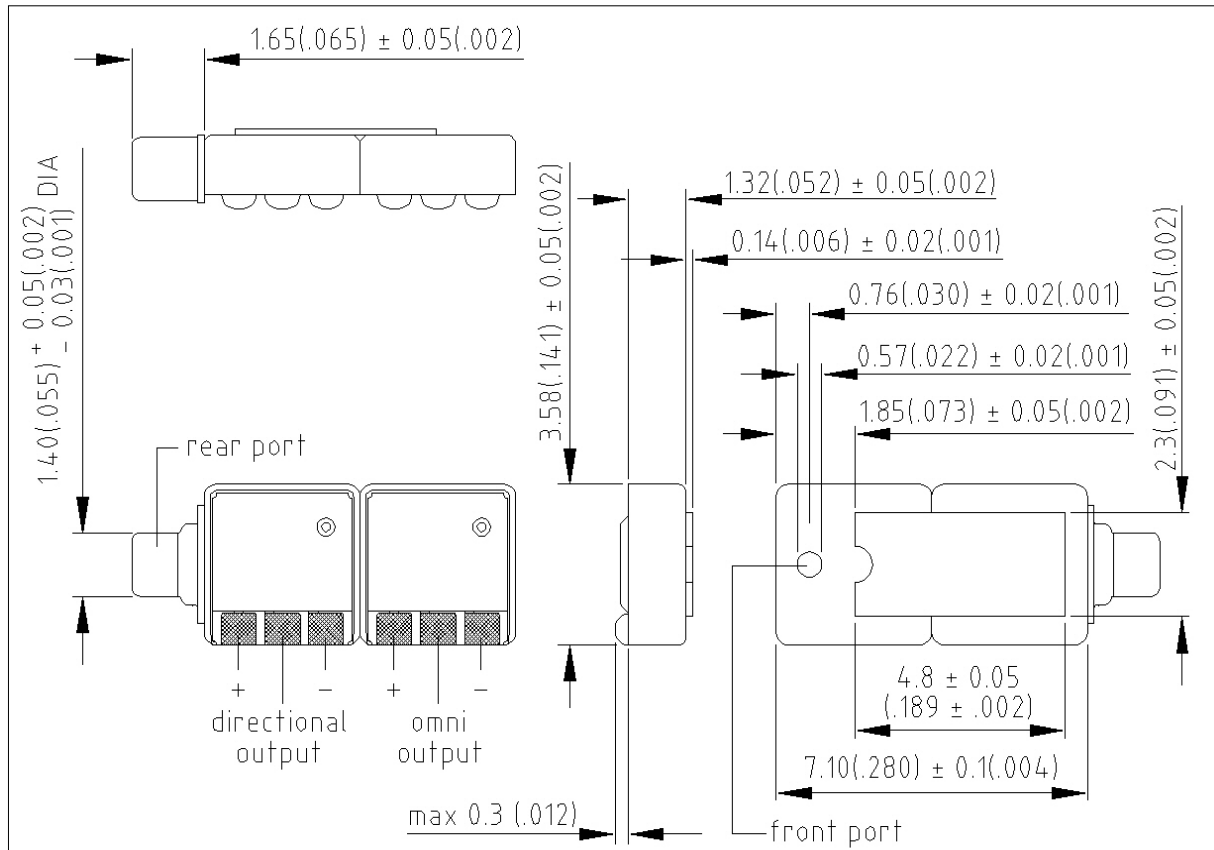
The 6913 is a unit consisting of a directional and an omni-directional microphone for hearing instruments.



Features

- Low noise CMOS amplifier with improved power supply feedthrough attenuation
- High sensitivity of directional microphone

Product drawing - Dimensions in mm [inch]



Sonion reserves the right to make changes at any time to improve reliability, function or design, in order to provide the best product possible.

Specifications

All parameters are specified at 1.0 V and 1 MOhm // <200pF load impedance, AC-coupled with 1µF, unless specified otherwise. Environmental conditions: 23°C (73.4°F), 50 % RH

Parameters directional		Min	Typ	Max	Unit	Comments
Sensitivity *	@ 100 Hz	-30	-22	-14	dB	re. 1 kHz value
	@ 1 kHz	-37.5	-34.5	-31.5	dB	re. 1V per Pascal
	@ 3.2 kHz	5	8	11	dB	re. 1 kHz value
Peak frequency			3.2		kHz	Approx.
Equivalent noise (A-weighted)			32	35	dB SPL	
Power supply feedthrough		30	33		dB	
Battery voltage range		0.8	1	5	VDC	
Battery drain		28	30	35	µA	
Output impedance **		3	4.5	5.5	kOhm	
Delay time			12		µs	
Null angle		105	120	135	Degrees	
AI-DI			5.5		dB	
Input-referred vibration sensitivity			77		dB SPL/g	1 kHz ref. acc. in axial dir.
Humidity coefficient of sensitivity			0.06		dB/%RH	
Input-referred EMI noise ***	0.8-0.96 GHz			30	dB SPL	according SMI 255, E=75 V/m
	1.8-2.0 GHz			30	dB SPL	according SMI 255, E=50 V/m
Phase (dir-omni)****	@ 200 Hz	30	60	90	Degrees	
	@ 1 kHz	30	60	90	Degrees	
	@ 6 kHz	-90	-60	-30	Degrees	
* Sensitivity change on reducing supply from 1.3 VDC to 0.9 VDC: -1 dBtyp., -3 dB max.						
** Output impedance change on reducing supply from 1.3 VDC to 0.9 VDC: 7.5 kOhm max.						
*** EMI noise measured in GTEM cell according variant of SMI255. Microphone soldered with 10 mm effective lead wire length to a shielded hearing instrument which is connected acoustically to measurement setup.						
**** Phase is measured in a free field setup with all ports open and expressed from -180 deg to +180 deg.						

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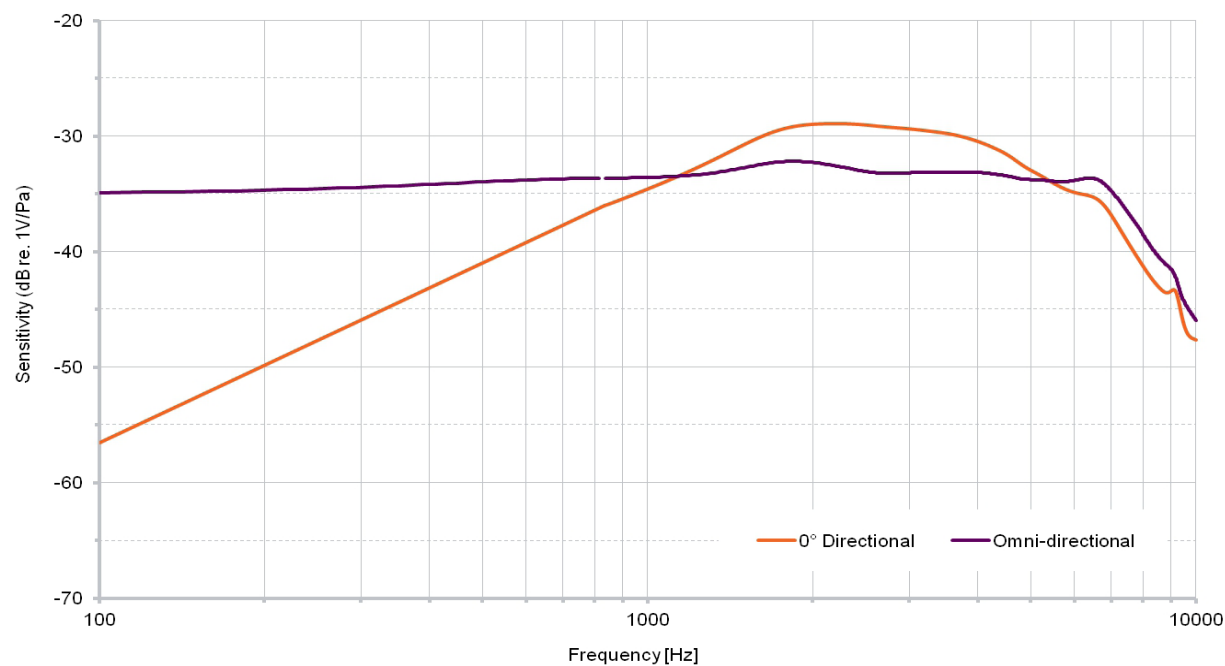
Specifications

All parameters are specified at 1.0 V and 1 MOhm // <200pF load impedance, AC-coupled with 1µF, unless specified otherwise. Environmental conditions: 23°C (73.4°F), 50 % RH

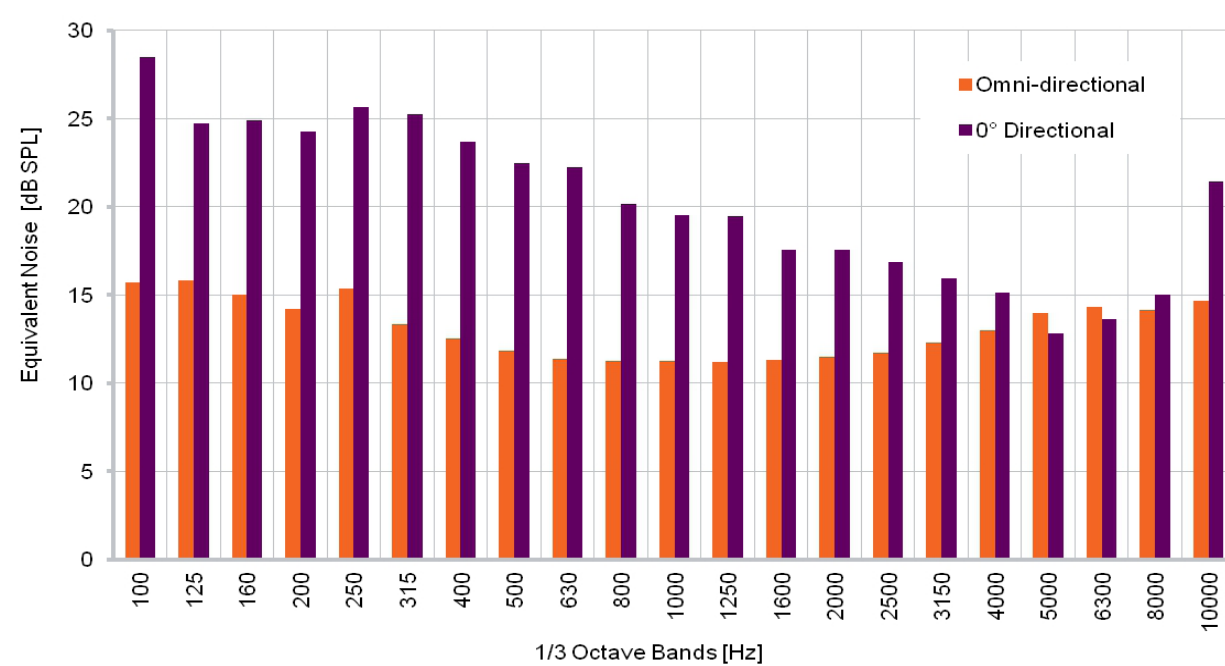
Parameters omni-directional		Min	Typ	Max	Unit	Comments
Sensitivity *	@ 80 Hz	-5	-3	-1	dB	re. 1 kHz value
	@ 1 kHz	-36.5	-33.5	-30.5	dB	re. 1V per Pascal
	@ 5.8 kHz	-1	2	5	dB	re. 1 kHz value
Peak frequency			5.8		kHz	Approx.
Equivalent noise (A-weighted)			26.5	29.5	dB SPL	
Power supply feedthrough		30	33		dB	
Battery voltage range		0.8	1	5	VDC	
Battery drain		28	30	35	µA	
Output impedance **		3	4.5	5.5	kOhm	
Input-referred vibration sensitivity			67		dB SPL/g	1 kHz ref. acc. in axial dir.
Humidity coefficient of sensitivity			0.025		dB/%RH	
Input-referred EMI noise ***	0.8-0.96 GHz			30	dB SPL	according SMI 255, E=75 V/m
	1.8-2.0 GHz			30	dB SPL	according SMI 255, E=50 V/m
Operating temperature range		-17	23	63	°C	
Storage temperature range		-40		63	°C	
ESD protection level: Class 2 according to MIL-STD-750D, test method 1020,2.						
Apply protection in accordance with IEC 61340-5-1 and 61340-5-2.						
* Sensitivity change on reducing supply from 1.3 VDC to 0.9 VDC: -1 dBtyp., -3 dB max.						
** Output impedance change on reducing supply from 1.3 VDC to 0.9 VDC: 7.5 kOhm max.						
*** EMI noise measured in GTEM cell according variant of SMI255. Microphone soldered with 10 mm effective lead wire length to a shielded hearing instrument which is connected acoustically to measurement setup.						

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Typical response curve

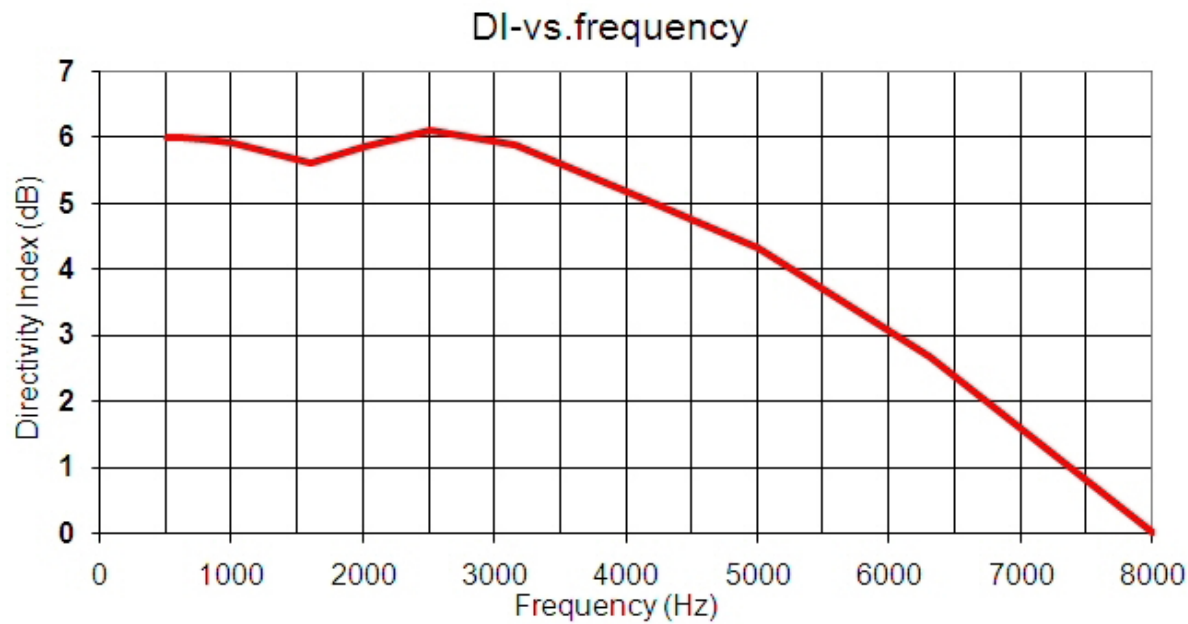


Typical 1/3 octave equivalent noise

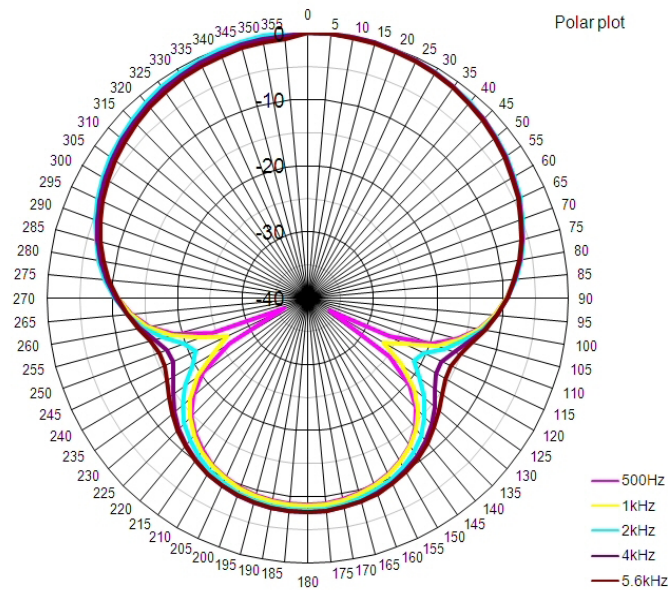


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Typical response curve



Polar plot



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