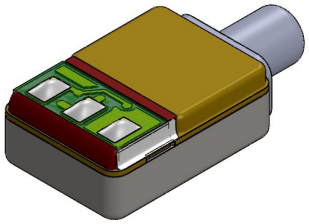
Data Sheet

Microphone 50JB81

Description

Miniature electret condenser microphone for communication device applications.



Features

- Standard performance in 30% smaller volume
- Ski - slope roll - off: less sensitivity for low frequency rumbling
- To be connected with 2 or 3 wires
- Low noise amplifier
- Superior EMI and ESD suppression
- Highly resistance to mechanical shock

Description

All Sonions' microphone families are based on an electret condenser principle, which provides advanced performance in a miniature package. The microphone Integrated Circuit design uses the latest technology to provide the lowest noise and highest EMI protection.
The 5000 microphone is 30% smaller than existing industry standard microphones, yet packs similar performance. The 5000 microphone has been built on known technology and production concepts.
The 5000 microphone will offer design engineers more freedom in two ways: a) it will consume 30% less space than existing industry standard microphones; b) Rectangular offer more rotational freedom than square, because the microphone can be turned three axis to achieve different footprints in application design.
The 50JB81 is an omnidirectional microphone specifically tuned for noisy applications.
The microphone is tuned to be less sensitive for low frequency rumbling, increasing speech intelligibility.
The construction is made to withstand severe environmental conditions. All these features, and the small size, makes the 50JB81 the ideal solution for discrete and comfortable communication devices.
Examples of applications:

- Surveillance/security communication radios
- Military communication
- Boom microphones
- Hearing aids
- Mobile phones

For microphones with superior noise levels we refer to the 6500-series
For other variations, please visit the Sonion website: www.sonion.com

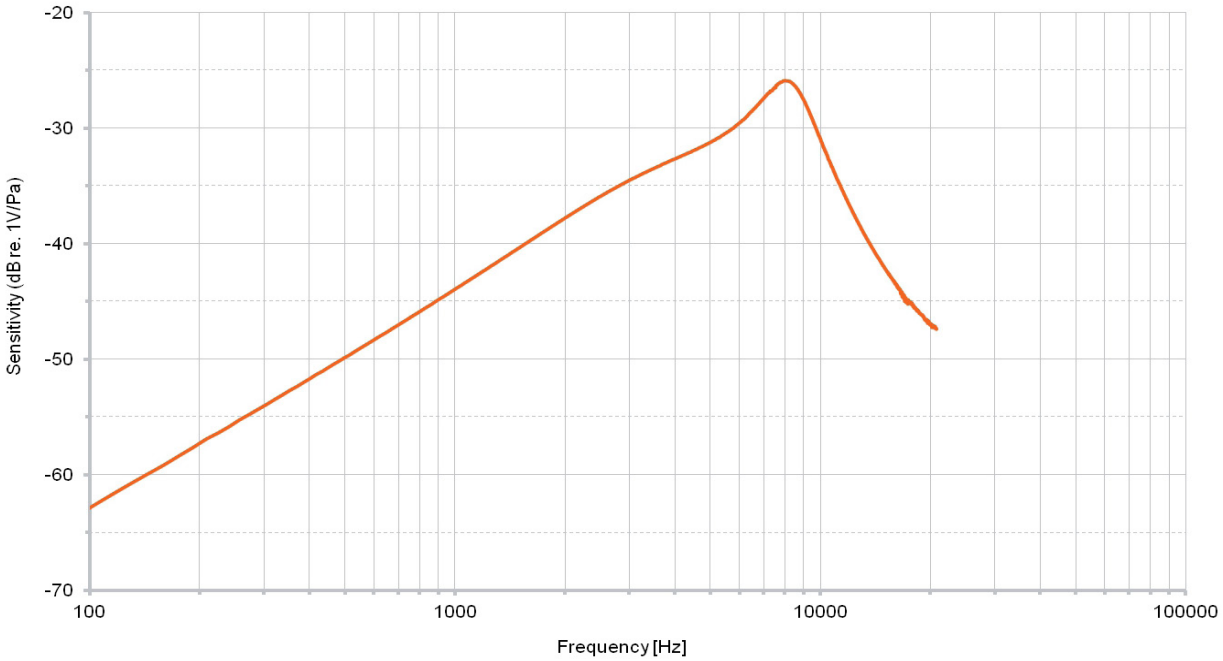
DK: +45 4630 6666
USA: +1 952 543 8300
PRC: +86 512 6832 3401
NL: +31 20 6068 100

RoHS 2011/65/EU

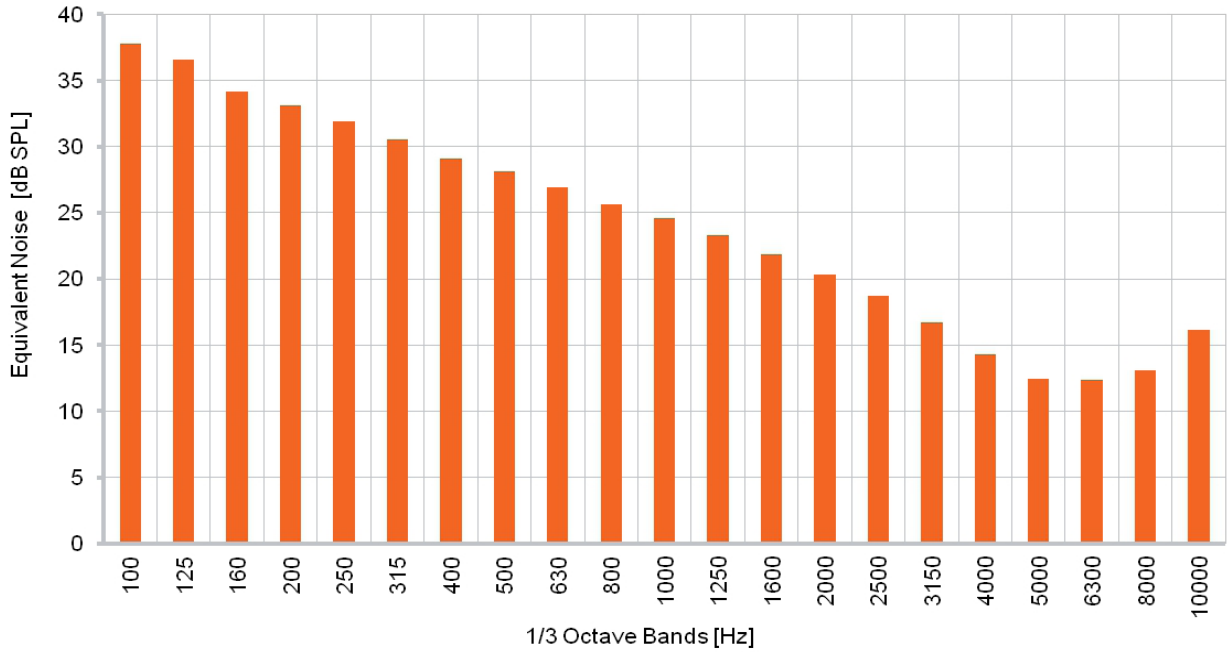
Item-Configuration number: 3500-3107081
Version: 2
Version date 02-Mar-2017

Graphs

Typical response curve



Typical 1/3 octave equivalent noise



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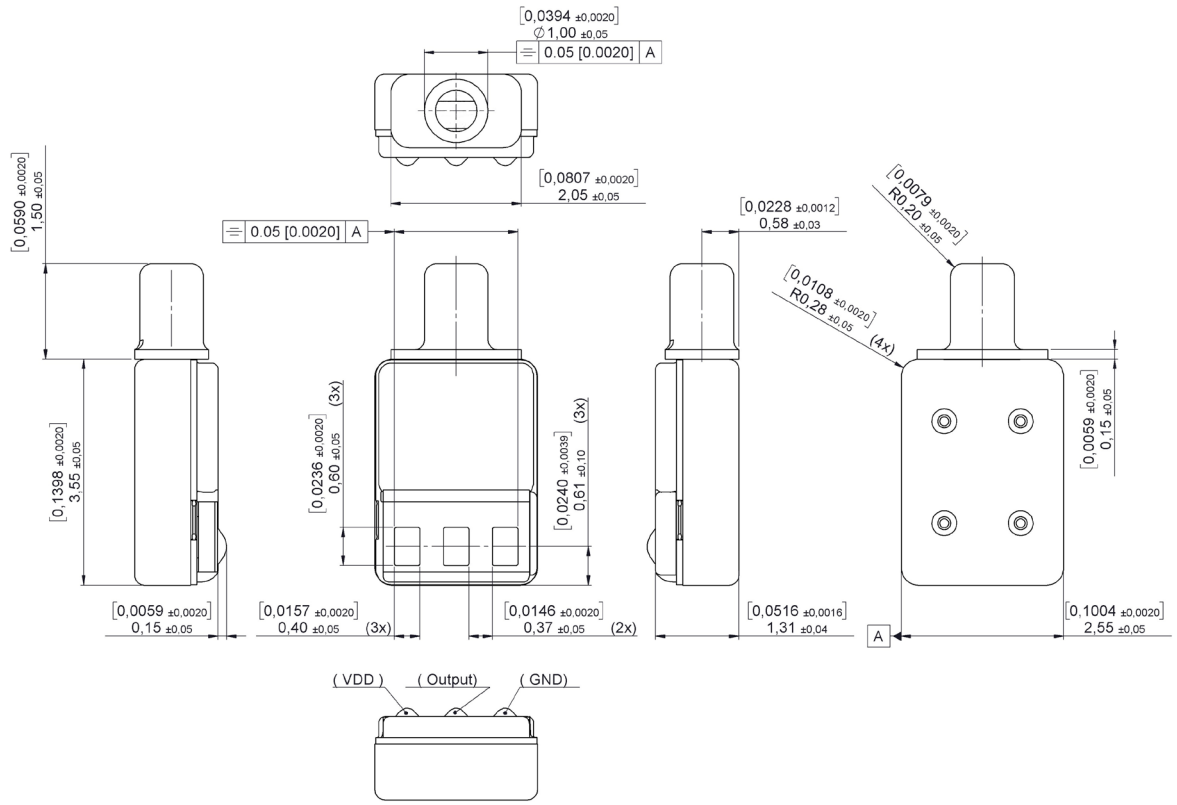
Data

All parameters are specified at 0.9 V and 1 MOhm // <200pF load impedance, ACcoupled with 1µF, unless specified otherwise. Environmental conditions: 23°C (73.4F), 50% RH.

Parameters		Min	Typ	Max	Unit	Comments
Sensitivity *	@ 300 Hz	-12.5	-10.5	-8.5	dB	re. 1 kHz value
	@ 1 kHz	-47	-44	-41	dB	re. 1V per Pascal
	@ 8 kHz	15	18	21	dB	re. 1 kHz value
Peak frequency			8		kHz	
Equivalent noise (A-weighted)			38	40	dB SPL	
Power supply feedthrough			-14	-12	dB	
Battery voltage range		0.8	0.9	5	VDC	
Battery drain		10	17	30	µA	
Output impedance **		3	4.5	6	kOhm	
Input-referred vibration sensitivity			67		dB SPL/g	1 kHz ref.
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.						
* 1 kHz sensitivity at 1.3 VDC supply: -43 dB re. 1V/Pa typ.						
** Output impedance at 1.3 VDC supply: 3 kOhm typ.						

Packaging



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