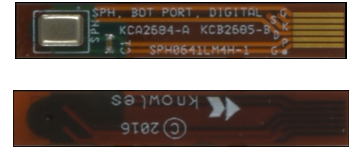


# KAS-700-0148

## Mics on Flex, 2 Pack, SPH0641LM4H-1, MORELLO, Bottom Port PDM



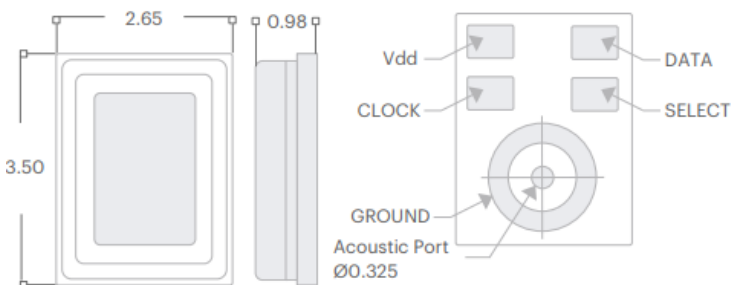
# Knowles robust, SPH0641LM4H-1 high-performance digital microphone mounted on flexible bias boards

## ASSEMBLY OVERVIEW

- ▶ Bottom Port PDM microphone mounted to flexible bias board.
- ▶ For use with Knowles “Muskie” Microphone Evaluation Kit. Part# KAS-33100-0004
- ▶ 64.3dB Signal-to-Noise Ratio (SNR) in a small footprint, ideal for a wide range of use cases in smartphones and mobile devices
- ▶ 10% THD at 120 dB SPL and a large dynamic range enables improved barge-in performance and resilience to wind noise turbulence
- ▶  $\pm 1$  dB sensitivity matching and a noise-immune PDM output enhance multi-mic architecture performance and ease system integration

KEY PARAMETERS	SPECIFICATIONS
Signal-to-noise ratio (SNR)	64.3 dB (A)
Acoustic Overload Point (1% / 10% AOP)	108 dB SPL / 120 dB SPL
Low Frequency Roll Off (LFRO)	45 Hz
Bandwidth ( $\pm 3$ dB)	15.5 kHz
Current consumption	620 uA
Sensitivity and Tolerance	-26 $\pm$ 1 dB FS
Supply voltage	1.6 to 3.6V
Interface	PDM Digital
Clock Rates Supported (Normal Mode)	1.0 to 4.8 MHz
Port location	Bottom Port
Package dimensions	3.50 x 2.65 x 0.98 mm

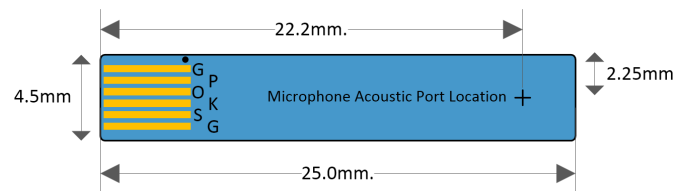
## MICROPHONE DIMENSIONS (MM)



## KAS-700-0048 MIC ON FLEX BOM

- ▶ SPH0641LM4H-1, Bottom port digital microphone
- ▶ BYPASS CAPACITOR, 0.1uF, 0.1 F  $\pm 10\%$  16V, X5R, 0402
- ▶ KCB2685 FLEX CIRCUIT PCB

## FLEX CIRCUIT DIMENSIONS



## FLEX CIRCUIT PINOUTS

The table below shows the pinout for the flex connector. The same connector can be used for all microphone flexes, regardless of port orientation or electrical interface.

Flex Pin#	Flex Marking	Signal
1	G	Ground
2	P	Power
3	D	Data
4	K	Bit Clock
5	S	Select
6	G	Ground

## ADDITIONAL INFORMATION

For inquiries, please visit the Knowles website at <https://www.knowles.com/subdepartment/evaluation-kits/dpt-microphones/subdpt-sisonic-surface-mount-mems> Or contact your nearest Knowles representative.

### DISCLAIMER

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples given herein, any typical values stated herein and/or any information regarding the application of the device, Knowles Electronics, LLC hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

### INFORMATION

For further information on technology, delivery terms and conditions and prices, please contact a Knowles representative.

© 2019, Knowles Electronics, LLC, Itasca, IL USA. All Rights Reserved. Knowles and the logo are trademarks of Knowles Electronics, LLC.

