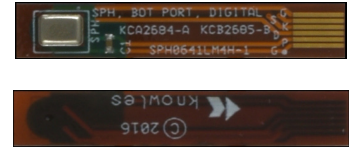


KAS-700-0148

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



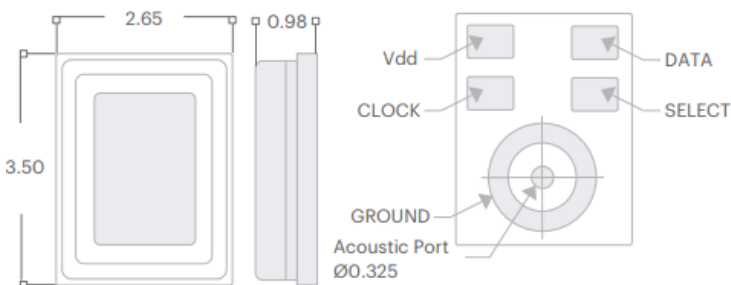
Knowles robust, SPH0641LM4H-1 high-performance digital microphone mounted on flexible bias boards

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
- ▶ ± 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 (± 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 |

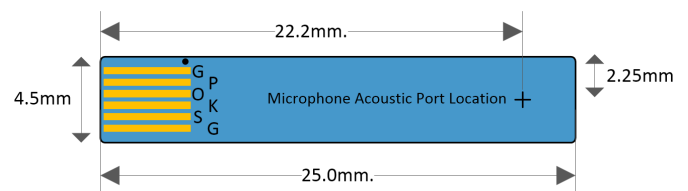
MICROPHONE DIMENSIONS (MM)



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.

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INFORMATION

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