

KAS-700-0146 Mics on Flex, 2 pack, SPW0690LM4H-1, CAMERON, Bottom Port PDM



Knowles robust, SPW0690LM4H-1 high-performance digital microphone mounted on flexible bias boards

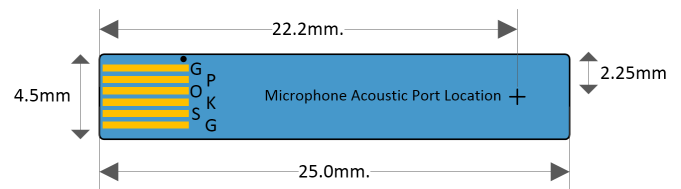
ASSEMBLY OVERVIEW

- ▶ Bottom Port PDM microphone mounted to flexible bias board.
- ▶ For use with Knowles “Muskie” Microphone Evaluation Kit. Part# KAS-33100-0004
- ▶ 66.5dB 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 135 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

KAS-700-0046 MIC ON FLEX BOM

- ▶ SPW0690LM4H-1, Bottom port digital microphone
- ▶ BYPASS CAPACITOR, 0.1uF, 0.1 F $\pm 10\%$ 16V, X5R, 0402
- ▶ KCB3859 FLEX CIRCUIT PCB

FLEX CIRCUIT DIMENSIONS



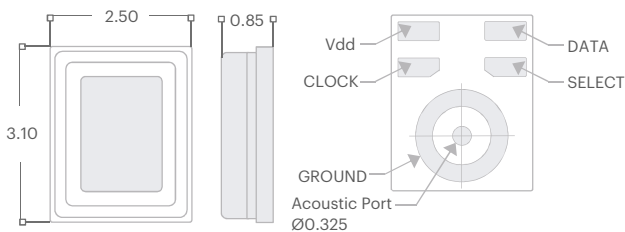
FLEX CIRCUIT PINOUTS

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 |

| KEY PARAMETERS | SPECIFICATIONS |
|--|-------------------------|
| Signal-to-noise ratio (SNR) | 66.5 dB (A) |
| Acoustic Overload Point (1% / 10% AOP) | 120 dB SPL / 135 dB SPL |
| Low Frequency Roll Off (LFRO) | 45 Hz |
| Bandwidth (± 3 dB) | 15 kHz |
| Current consumption | 1000 uA |
| Sensitivity and Tolerance | -41 ± 1 dB FS |
| Supply voltage | 1.65 to 3.6V |
| Interface | PDM Digital |
| Clock Rates Supported (Normal Mode) | 1.1 to 4.8 MHz |
| Port location | Bottom Port |
| Package dimensions | 3.10 x 2.50 x 0.85 mm |

MICROPHONE DIMENSIONS (MM)



ADDITIONAL INFORMATION

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

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