

KAS-700-0149 Mics on Flex, 2 Pack, SPM0687LR5H-1, WINFREY, Bottom Port Differential Analog



Knowles analog microphone exclusively for far field IoT/ANC applications mounted on flexible bias boards

ASSEMBLY OVERVIEW

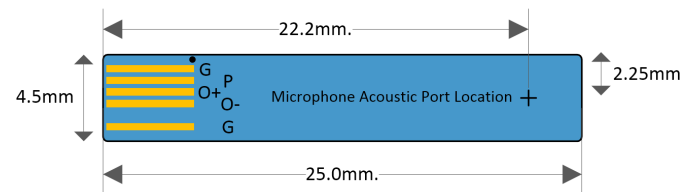
- ▶ Bottom Port differential analog microphone mounted to flexible bias board.
- ▶ For use with Knowles “Muskie” Microphone Evaluation Kit. Part# KAS-33100-0004
- ▶ 70dB Signal to Noise Ratio (SNR) enables far-field voice pick up for IoT applications.
- ▶ 130dB Acoustic Overload Point (AOP) provides a large dynamic range for barge-in applications.
- ▶ Differential mode configuration improves noise immunity to power supply variations, allowing extension of microphone PCB traces.

| KEY MICROPHONE PARAMETERS | SPECIFICATIONS |
|-----------------------------------|---|
| Signal-to-noise ratio (SNR) | 70 dB (A) |
| Acoustic Overload Point (10% AOP) | 130 dB SPL |
| Low Frequency Roll Off (LFRO) | < 13 Hz |
| Bandwidth (±3dB) | 13 kHz |
| Current consumption (uA)* | 300 uA |
| Sensitivity and Tolerance | -40 +/- 1 dB (Single Ended) -34.75 +/- 1 dB (Differential) |
| Supply voltage (V) | 2.75 V |
| Interface | Analog |
| Port location | Bottom Port |
| Package dimensions | 4.72 x 3.76 x 1.24 mm |

KAS-700-0049 MIC ON FLEX BOM

- ▶ SPM0687LR5H-1, Bottom port differential analog microphone
- ▶ BYPASS CAPACITOR, 0.1uF, 0.1 F ±10% 16V, X5R, 0402
- ▶ KCB3924 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 | O+ | Data |
| 4 | O- | Bit Clock |
| 5 | - | NC |
| 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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