

# 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

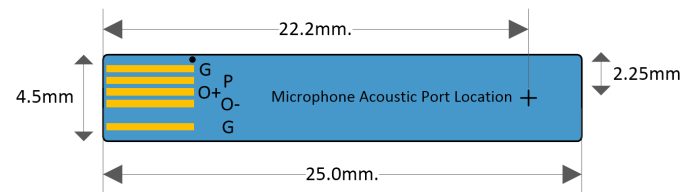
## ASSEMBLY OVERVIEW

- ▶ 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.

## 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    |

| 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)<br>-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   |

## 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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