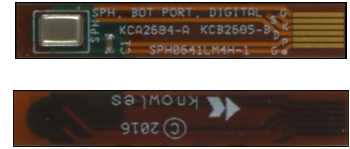


# KAS-700-0147

## Mics on Flex, 2 Pack, SPH0690LM4H-1, EVEREST, Bottom Port PDM



Knowles robust, SPH0690LM4H-1 high-performance digital microphone for IoT applications mounted on flexible bias boards

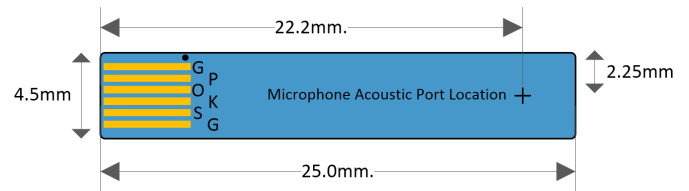
### ASSEMBLY OVERVIEW

- ▶ Bottom Port PDM microphone mounted to flexible bias board.
- ▶ For use with Knowles "Muskie" Microphone Evaluation Kit. Part# KAS-33100-0004
- ▶ High Signal-to-Noise Ratio (SNR) in a small footprint, ideal for a wide range of use cases in IoT devices and voice-enabled applications
- ▶ 10% THD at 130 dB SPL and a large dynamic range enables improved barge-in performance and resilience to wind noise turbulence
- ▶ Strong environmental robustness and improved ingress protection
- ▶  $\pm 1$  dB sensitivity matching and a noise-immune PDM output enhance multi-mic architecture performance and ease system integration

### KAS-700-0047 MIC ON FLEX BOM

- ▶ SPH0690LM4H-1, Bottom port digital microphone
- ▶ BYPASS CAPACITOR, 0.1uF, 0.1 $\mu$ F  $\pm 10\%$  16V, X5R, 0402
- ▶ KCB2685 FLEX CIRCUIT PCB

### FLEX CIRCUIT DIMENSIONS



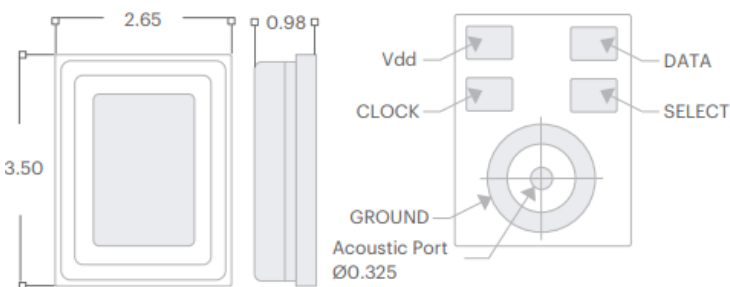
### FLEX CIRCUIT PINOUTS

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

KEY PARAMETERS	SPECIFICATIONS
Signal-to-noise ratio (SNR)	68 dB (A)
Acoustic Overload Point (1% / 10% AOP)	117 dB SPL / 130 dB SPL
Low Frequency Roll Off (LFRO)	30 Hz
Bandwidth ( $\pm 3$ dB)	14.5 kHz
Current consumption	750 $\mu$ A
Sensitivity and Tolerance	$-35 \pm 1$ 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	3.50 x 2.65 x 0.98 mm

### MICROPHONE DIMENSIONS (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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