



**SmartSound™**  
Analog & Digital MEMS Microphones

## PDM Digital Output Multi-Mode Microphones from TDK InvenSense

### Description

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SmartSound™  
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T5837 and T5838 Bottom Ported PDM Digital Output Multi-Mode Microphone

TDK InvenSense introduces the [T5837](#) (part number MMICT5837-00-012) and the [T5838](#) (part number MMICT5838-00-012) Bottom Ported PDM Digital Output Multi-Mode Microphone. The T5837 has multiple modes of operation: High Quality, Low-Power (AlwaysOn), Ultrasonic and Sleep modes. The T5837 has high SNR in all operational modes. It has 133 dB SPL AOP in High Quality Mode and 117 dB SPL AOP in Low-Power mode.



SPEC	HIGH QUALITY MODE	LOW-POWER MODE	ULTRASONIC MODE
Sensitivity	-37 dB FS ±1 dB	-21 dB FS ±1 dB	-37 dB FS ±1 dB
SNR	68 dBA	65.5 dBA	68dBA
Current	310 µA	120 µA	500 µA
AOP	133 dB SPL	117 dB SPL	133 dB SPL
Clock	2.0 MHz to 3.7 MHz	400 kHz to 800 kHz	4.2 MHz to 4.8 MHz

T5838 Bottom Port PDM Digital Output Multi-Mode Microphone

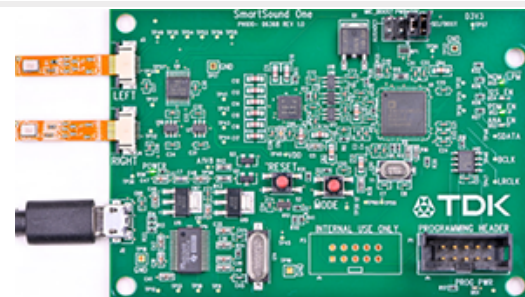
The [T5838](#) has multiple modes of operation: High Quality, Low-Power (AlwaysOn), Ultrasonic, and Sleep along with new AlwaysOn modes: Acoustic Activity Detect (AAD) Analog and Digital. The T5838 has high SNR in all operational modes. It has 133 dB SPL AOP in High Quality Mode and 119 dB SPL AOP in Low-Power mode.



SPEC	HIGH QUALITY MODE	LOW-POWER MODE	ULTRASONIC MODE
<b>Sensitivity</b>	-41 dB FS $\pm$ 1 dB	-26 dB FS $\pm$ 1 dB	-41 dB FS $\pm$ 1 dB
<b>SNR</b>	68 dBA	65 dBA	68dBA
<b>Current</b>	310 $\mu$ A	120 $\mu$ A	500 $\mu$ A
<b>AOP</b>	133 dB SPL	119 dB SPL	133 dB SPL
<b>Clock</b>	2.0 MHz to 3.7 MHz	400 kHz to 800 kHz	4.2 MHz to 4.8 MHz

### Flex Evaluation Boards

Both boards have flex evaluation boards making for easy access to pin out. The part numbers are [EV\\_T5837-FX2](#) and [EV\\_T5838-FX2](#). In addition, TDK InvenSense has also manufactured a MEMS Micro Interface Module, the Smartboard One test boards. The test boards come with one microphone (T5837) and works with any TDK MEMS Microphones boards ending in FX2 suffix.



### About TDK InvenSense

**InvenSense, Inc, a TDK Group Company** is part of the Sensor System Business Company within TDK and is the industry leader in MEMS Motion, Audio, and Pressure Solutions for the consumer, industrial, automotive, and IoT market segments. TDK provides a robust portfolio of MEMS 3/6/7/9 axis motion sensors, accompanied by the highest performing MEMS audio microphones, and sensors. TDK continues to push the boundaries of performance and quality; setting new standards of innovation across multiple industries.

### About Component Distributors, Inc. (CDI)

**Component Distributors, Inc. (CDI)** is a value-added distributor of high-performance LED, Power, RF & Microwave, Wireless Sensor component technologies. CDI distributes globally and provides local application support and customer service across the Americas.

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### Category

1. Ewave
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### Date Created

October 5, 2022

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