## SmartSound™

### PRIMARY APPLICATIONS

- **True Wireless Audio**
  Earbuds today feature a multitude of microphones. Not only for phone calls, but for noise cancelation, transparency functions, and always-on smart assistants.

- **Smart Homes**
  With multiple mics configured in an array, the resulting beam pattern makes it easy for products like smart assistants to hear voice commands from across the room.

- **Mobile Devices**
  Wide dynamic range and high sound to noise ratio produces great results in any environment.

- **Robotics**
  Advanced semiconductor micro fabrication techniques advance voice recognition technology and further improve the intelligence of interactive robots.

### FEATURED PRODUCTS

#### T5837 & T5838

- **T5837**
  - Package Size: 3.5 × 2.65 × 0.98 mm
  - Bottom Port
  - Sensitivity: −37 dB FS ±1 dB (high quality mode), −21 dB FS ±1 dB (low-power mode)
  - SNR: 68 dBA (high quality), 65 dBA (low-power)
  - AOP: 133 dB SPL (high quality), 117 dB SPL (low-power)
  - Notes: Industry standard sensitivity

- **T5838**
  - Package Size: 3.5 × 2.65 × 0.98 mm
  - Bottom Port
  - Sensitivity: −41 dB FS ±1 dB (high quality mode), −26 dB FS ±1 dB (low-power mode)
  - SNR: 68 dBA (high quality), 65 dBA (low-power)
  - AOP: 133 dB SPL (high quality), 119 dB SPL (low-power)
  - Notes: AAD with programmable thresholds & filters with 20 μA power consumption

#### T5848

- **T5848**
  - Package Size: 3.5 × 2.65 × 0.98 mm
  - Bottom Port
  - Sensitivity: −37 dB FS ±1 dB (high quality mode), −26 dB FS ±1 dB (low-power mode)
  - SNR: 68 dBA (high quality), 65 dBA (low-power)
  - AOP: 133 dB SPL (high quality), 119 dB SPL (low-power)
  - Notes: Ultra-low power, high SNR, multi-mode I²S

#### SmartSound One

- **SmartSound One**
  - TDK’s SmartSound One (MD-54001-D58) is a USB plug-and-play microphone interface module that enables rapid evaluation and development of TDK Analog and Digital MEMS microphone solutions.

### PRODUCT CATEGORIES

- **T5837 & T5838**
  - Headsets & Earbuds, Smart Speakers, Game Controllers, IoT
  - *Industry-leading low power consumption: 50 – 70% lower than competitors*
  - *High SNR and AOP in all operational modes*
  - *Acoustic Activity Detect w/ programmable thresholds and filters with power consumption as low as 20 μA*
  - *Available with −37 dBFS sensitivity in HQM (T5837)*

- **T5838**
  - Smartphones, Tablets, Headsets
  - *High SNR & AOP in all operational modes*
  - *Acoustic Activity Detect w/ programmable thresholds and filters with power consumption as low as 20 μA*

- **T5837 & T5848**
  - Smartwatches, Wearables, TV Remotes & Set Top Boxes
  - *Industry-leading, first high SNR & high dynamic range I²S output, high SNR & AOP in all modes (T5848)*
  - *Ultra-low power consumption*
  - *I²S output allows direct connection to a wide variety of SoCs, MCUs (T5848)*
  - *Acoustic Activity Detect w/ programmable thresholds and filters with power consumption as low as 20 μA*

### PRODUCT DETAILS

<table>
<thead>
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**Scan Here** for additional materials and information.