

### GENERAL DESCRIPTION

The ICS-40619 is an analog MEMS microphone with very high SNR and a low-power AlwaysOn mode. The ICS-40619 includes a MEMS microphone element, an impedance converter, and a differential output amplifier.

This microphone features a low-power mode, which is activated when the supply voltage is <math><2.0\text{ V}</math>. In this mode, the ICS-40619 operates with  $55\ \mu\text{A}</math>.$

Other high-performance specifications include 132 dB SPL acoustic overload point in high performance mode, tight  $\pm 1\text{ dB}</math> sensitivity tolerance and enhanced immunity to both radiated and conducted RF interference.$

The ICS-40619's electro-acoustic performance matches the bottom port ICS-40618, making this pair of microphones suitable to use together in applications requiring both top and bottom port devices.

The ICS-40619 is available in a small  $3.50\text{ mm} \times 2.65\text{ mm} \times 0.98\text{ mm}</math> top port surface-mount package.$

### APPLICATIONS

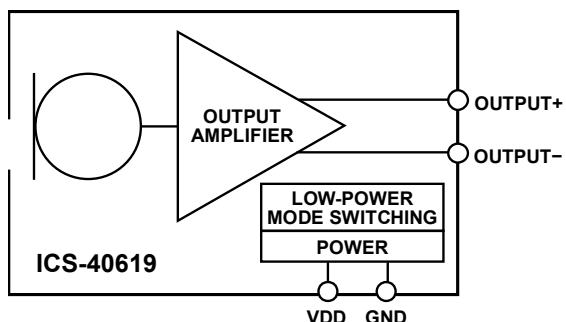
- Smartphones
- "AlwaysOn" listening
- Wearable devices
- Still and video cameras
- Bluetooth headsets
- Security and surveillance

### FEATURES

SPEC	HIGH PERFORMANCE MODE	LOW-POWER MODE
SNR	67 dBA	67 dBA
Current	165 $\mu\text{A}$	55 $\mu\text{A}$
AOP	132 dB SPL	129 dB SPL

- Differential non-inverting analog output
- $-38\text{ dBV}</math> sensitivity (differential)$
- $\pm 1\text{ dB}</math> sensitivity tolerance$
- Extended frequency response from 50 Hz to 20 kHz
- Enhanced RF immunity
- $-85\text{ dB PSRR}</math>$
- $3.50 \times 2.65 \times 0.98\text{ mm}</math> top port surface-mount package$
- Compatible with Sn/Pb and Pb-free solder processes
- RoHS/WEEE compliant

### FUNCTIONAL BLOCK DIAGRAM



### ORDERING INFORMATION

PART	TEMP RANGE	PACKAGING
ICS-40619	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$	13" Tape and Reel
EV_IC3-40619-FX	—	