

### GENERAL DESCRIPTION

The ICS-40618 is an analog MEMS microphone with very high SNR and a low-power AlwaysOn mode. The ICS-40618 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-40618 operates with 55  $\mu\text{A}$ .

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

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

The ICS-40618 is available in a small 3.50 mm  $\times$  2.65 mm  $\times$  0.98 mm bottom port surface-mount package.

### APPLICATIONS

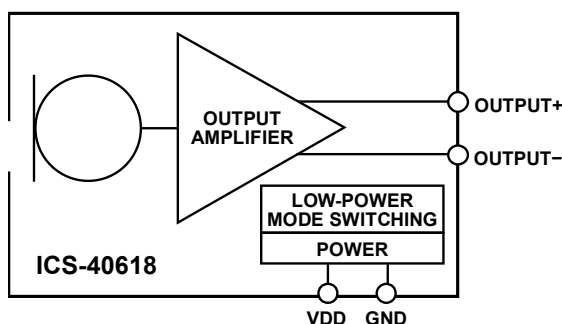
- Smartphones
- "AlwaysOn" listening
- Wearable devices
- Still and video cameras
- Bluetooth headsets
- Security and surveillance

### 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
- $-38$  dBV sensitivity (differential)
- $\pm 1$  dB sensitivity tolerance
- Extended frequency response from 50 Hz to 20 kHz
- Enhanced RF immunity
- $-85$  dB PSRR
- 3.50  $\times$  2.65  $\times$  0.98 mm 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-40618	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$	13" Tape and Reel
EV_IC3-40618-FX	—	