

# MEMS Microphones

## Analog and Digital MEMS microphones everywhere



### MEMS microphones for compact and affordable solutions with high quality and high fidelity sound

MEMS microphones today are not only used to capture ambient sounds. They also deliver stereo capabilities, can enable high-end functionality like active noise cancellation, directivity with beam forming, and voice recognition.

They offer very high performance in terms of Signal-to-Noise Ratio (SNR), low distortion, and sensitivity matching. They also feature low power consumption and very small form factors.

ST is an independent device manufacturer with consolidated manufacturing and testing processes. We ensure robust and long-term reliability for all automotive and industrial applications.

#### KEY FEATURES & BENEFITS

- SNR performance
- Wide dynamic range
- Multiple performance modes
- Low power consumption
- Sensitivity matching
- High shock and thermal resistance
- Small form factor

#### KEY APPLICATIONS

- Mobile handsets
- Wearable & hearable devices
- Smart speakers and IoT
- Laptops and tablets
- Predictive maintenance
- Hands free calls
- Active noise-canceling headsets
- Voice recognition

## Digital MEMS microphones

Part number	Port	Package size (mm)	Roll-off (Hz)	SNR (dB)	Sensitivity (dBFS)	AOP (dB SPL)	Current consumption (µA)
MP23DB01HP	Bottom	3.5 x 2.65 x 0.98	35	65 (NM)	-41 (NM)	135 (NM)	800 (NM)
				64 (LP)	-24 (LP)	120 (LP)	285 (LP)
MP23DB02MM	Bottom	3.5 x 2.65 x 0.98	35	65 (NM)	-26 (NM)	122 (LP)	800 (NM)
				64 (LP)	-26 (LP)	122 (LP)	285 (LP)
MP34DT05-A	Top	4 x 3 x 1	20	64	-26 ± 3	122.5	650
MP34DT06J	Top	4 x 3 x 1	20	64	-26 ± 1	122.5	650
IMP34DT05	Top	4 x 3 x 1	20	64	-26 ± 3	122.5	650

Note: VDD range 1.6 V-3.6 V, frequency range 20 Hz-20 kHz

## Product portfolio

Part number	Type	Package size (mm)	Roll-off (Hz)	SNR (dB)	Sensitivity (dBV)	AOP (dB SPL)	Current consumption (µA)
IMP23ABSU**	Bottom	3.5 x 2.65 x 0.98	15	64	-38 ± 1	130	120
IMP23ABS1*	Bottom	3.5 x 2.65 x 0.98	15	64	-38 ± 1	130	120

Note: VDD range 1.6 V-3.6 V

\* Frequency range 20 Hz-20 kHz

\*\* Frequency range 20 Hz-80 kHz

## Hardware tools

Our complete set of evaluation boards allows flexible prototyping and comprehensive evaluation of our MEMS microphones.

### ST's MEMS Microphones everywhere



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