RECOGTEK

Product Brief

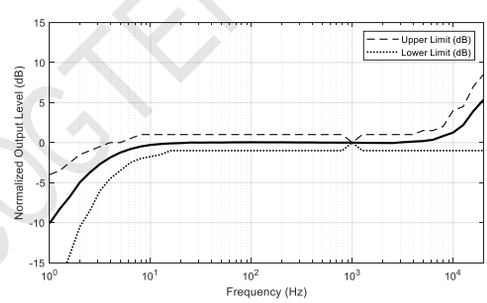
# RA2718B

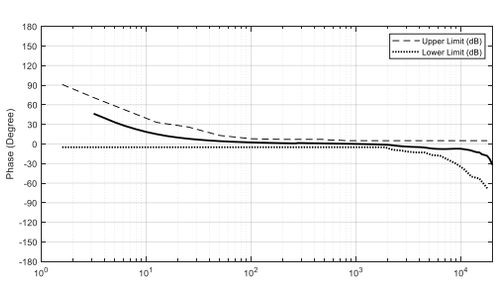
## COMPACT ANALOG BOTTOM PORT MICROPHONE

## PRODUCT DESCRIPTION

The RA2718B features matched sensitivity, ultra-low cut-off frequency response, which is ideal for the use in compact portable devices. Its bottom port silicon analog microphone with high signal-to-noise ratio, tightened sensitivity, is suitable for near far pick-up application such as speaker phone, and smart speaker.

The RA2718B performs a flat low-frequency response with cut-off frequency down to 10 Hz. This makes RA2718B as an excellent choice for functions requiring precise phase matching, such as the straight noise cancellation (SNC), the active noise cancellation (ANC), the environmental noise cancellation (ENC) or the acoustic echo cancellation (AEC).




## PRODUCT FEATURES

- ✓ Flat Frequency Response
  - Low Frequency cut-off: <10Hz
  - High Frequency Flatness: 14KHz
- ✓ Sensitivity of -39 ± 0.5 dBV/Pa
- ✓ High SNR of 64 dBV/Pa
- ✓ 127 dB SPL Acoustic Overload Point
- ✓ 2.75 x 1.85 x 0.95 mm Surface-Mount Package with Bottom Port

## PRODUCT BENEFITS

- ✓ High Flatness：10Hz(@-1dB) to 8KHz(@+1dB)
- ✓ +/-0.5dB uniformity to ensure product performance stability
- ✓ 3 passes IR reflow at 260°C
- ✓ Test# according to AEC-Q100-REV-G

## TYPICAL APPLICATIONS

- ✓ Smartphone, earphone, speaker phone
- ✓ Wearable Intelligent Equipment
- ✓ True Wireless Stereo
- ✓ Smart Speaker, Conferencing Phone
- ✓ ANC/ENC Headsets

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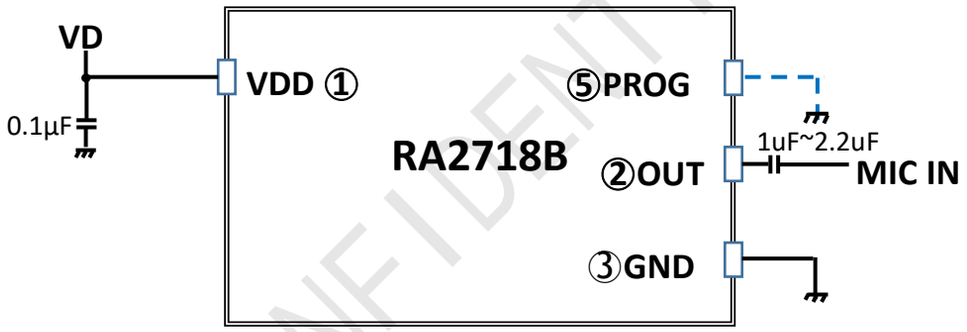
## Acoustic Characteristics

Test Conditions: $T_A$ = 25±2°C, 55%±20% R.H., $V_{DD}$ = 2.5V, no load, unless otherwise indicated

| Parameter | Symbol | Values | | | Units | Notes |
|---|---|---|---|---|---|---|
| | | Min | Typ. | Max | | |
| Supply Voltage | $V_{DD}$ | 1.6 | 2.5 | 3.6 | V | |
| Supply Current | $I_{DD}$ | | 130 | | μA | |
| Sensitivity | SEN | | -39 | | dBV/Pa | 94dB SPL @1kHz, +/-0.5dB variation |
| Signal to Noise Ratio | SNR | | 64 | | dBV/Pa | 94dB SPL @ 1kHz, A-weighted |
| Total Harmonic Distortion | THD | | 0.08 | | % | Measuring 2nd to 5th harmonic @1kHz |
| Acoustic Overload Point | AOP | | 127 | | dB SPL | THD = 10%, all operating modes |
| Low Freq. Cutoff Point | LFRO | | 3 | 6 | Hz | -3dB relative to 1kHz |
| High Freq. Flatness | HFF | | 14 | - | kHz | +3dB relative to 1kHz |

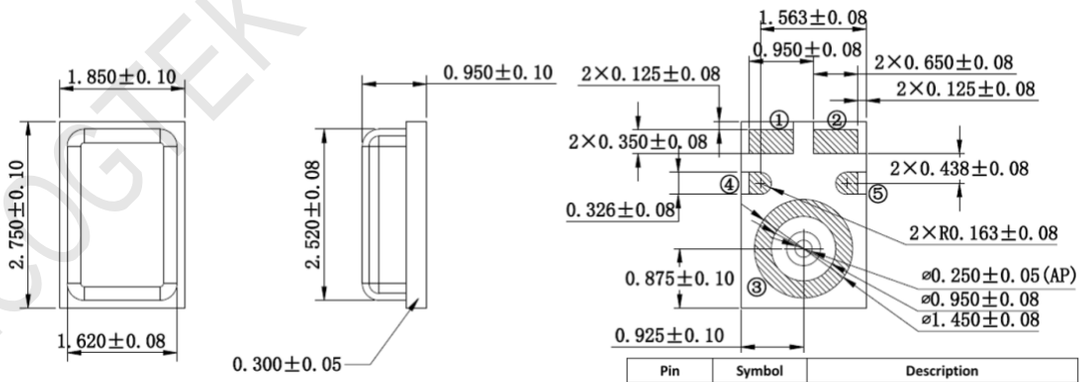
## Typical Application




**Note：** 1. NC pin could be connected to GND or NC depends on SMT convenience.

2. PROM pin has internal pull-down resistor, which is either connected GND or NC.

## PACKAGE INFORMATION




| Pin | Symbol | Description |
|---|---|---|
| 1 | VDD | Power Supply |
| 2 | OUT | Analog Output Signal |
| 3 | GND | Ground |
| 4 | NC | No Connect |
| 5 | PROG | One Time Program for Gain Adjust |



**PLEASE NOTE!**

The product brief is for information purposes of quickly understanding the key features, benefits. We kindly ask customers to refer to the relevant product datasheets provided by sales or marketing representatives. Our customers and their technical departments are required to evaluate the suitability of our products for the intended application.

RECOGTEK Technologies reserves the right to change the document and/or the information given herein at any time.

**WARNINGS**

Excepts as otherwise explicitly approved written document signed by authorized representatives of RECOGTEK Technologies, our products may not be used in any life-endangering applications, including but not limited to nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.