



BT SERIES

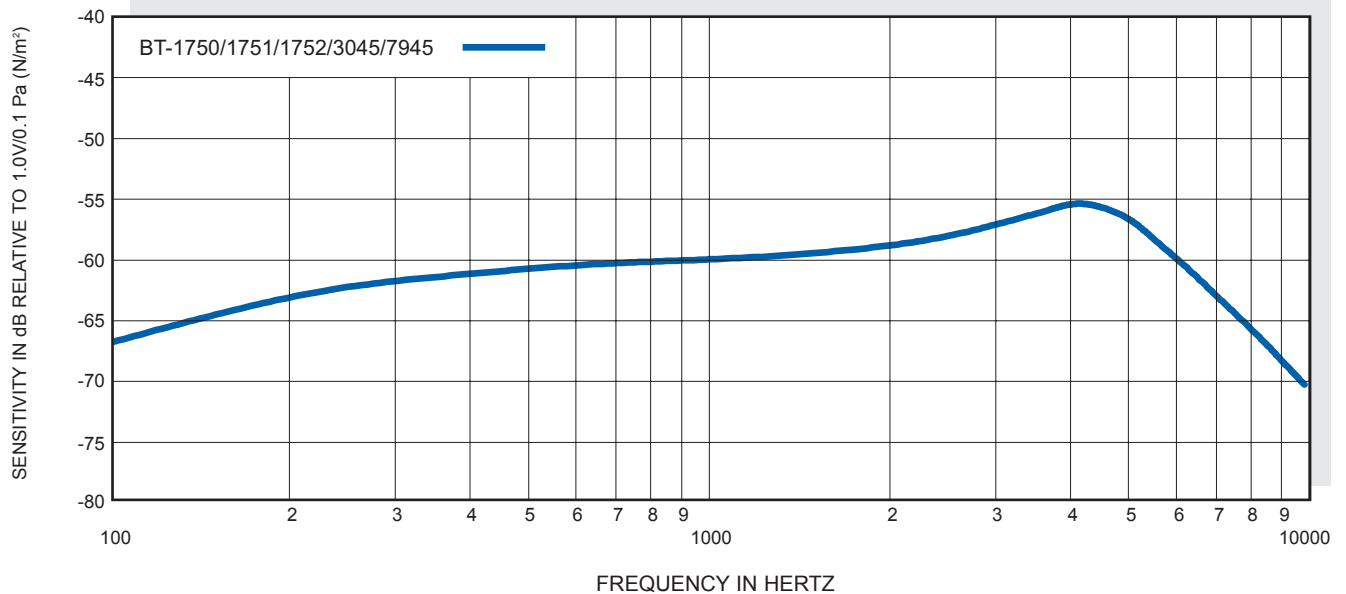


Actual Size

Features

- Electret condenser microphone
- Rugged construction to withstand severe environmental conditions
- High resistance to mechanical shock
- Various responses available
- Ideal for BTE applications

Standard Response



Open circuit sensitivity with 1.3VDC supply

Knowles

data sheet

Power Requirements

Supply Voltage (V_s)
 range: 0.9 to 10.0V_{DC}
 typical: 1.3V_{DC}

Quiescent Current Drain (@ $V_s = 1.3V_{DC}$)
 typical: 23μA
 maximum: 50μA

Performance

Response/Sensitivity
 see curves, pages 1, 4-5

Load Voltage (V_L)
 range: 0.2 to 0.9V_{DC}
 typical: 0.5V_{DC}

Sensitivity Range @ primary test frequency
 BT-3045/BT-3055 models: ±2dB
 all other models: ±3dB

Output Noise Level
 (A-weighted)
 maximum: -101.0dBV

Low Supply Voltage Sensitivity Loss
 (V_s reduced from 1.3 to 0.9V_{DC})
 typical: 0.5dB
 maximum: 3.0dB

Input-Referred Noise Level*
 (A-weighted, 1kHz ref.)
 typical: 24dB SPL
 maximum: 27dB SPL

Humidity Coefficient of Sensitivity
 typical: 0.03dB per %RH
 (in the absence of condensation)

Input-Referred Vibration Sensitivity*
 (1g acceleration, 1kHz ref.)
 maximum: 76dB SPL

Output Impedance @ 1kHz
 range: 2.0 to 6.0kΩ
 nominal: 3.5kΩ

Temperature Range
 operating: -17°C to 63°C
 storage: -40°C to 63°C

Acoustic Polarity
 Increased pressure at sound inlet
 causes a positive going voltage to
 appear at the output terminal, relative
 to the negative terminal

Power Supply Feedthrough Attenuation
 typical: 14dB, output-referred

* For standard, shifted peak, and damped peak responses only

Mechanical

Weight
 0.28 grams

Case Material
 Type 305 stainless steel

Dimensions
 See outline drawings, page 7

Solder Content
 Sn63Pb37

Optional Soldering Fixture

Base: ET-3042
 Nest Plate: ET-811
 Back Plate: ET-900

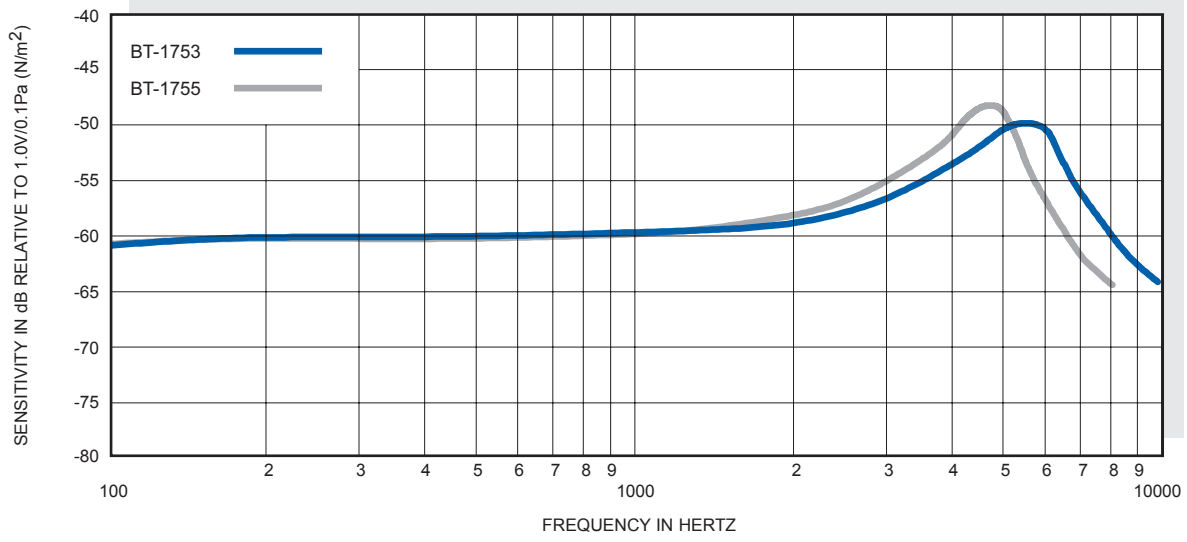
Model	Port	Response
BT-1750	0Kn	Standard
BT-1751	12S	Standard
BT-1752	9S	Standard
BT-1753	0Kn	Shifted Peak
BT-1754	12S	Shifted Peak
BT-1755	9S	Shifted Peak
BT-1757	12S	Damped Peak
BT-1759	Ka	Broadband
BT-1804	12S	6dB/octave Ski Slope
BT-1835	12S	12dB/octave Ski Slope
BT-3045	12S	Standard
BT-3055	12S	12dB/octave Ski Slope
BT-7945	12S	Standard

Microphones are also available with RFI suppression filters.

Other model variations available upon request. Contact Knowles Electronics for details.

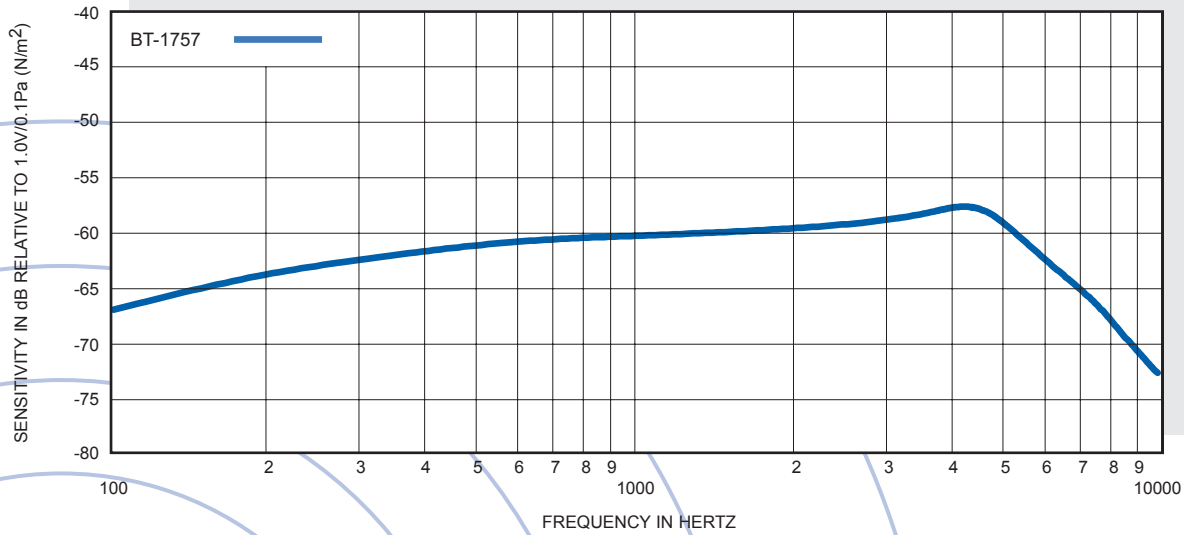


Shifted Peak Response



Open circuit sensitivity with 1.3VDC supply

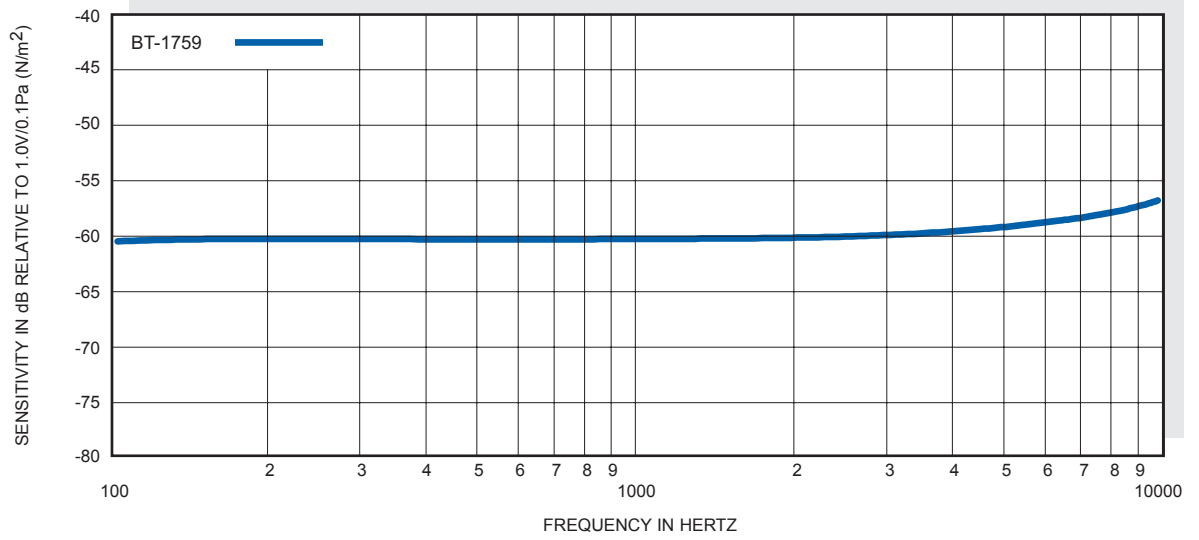
Damped Peak Response



Open circuit sensitivity with 1.3VDC supply

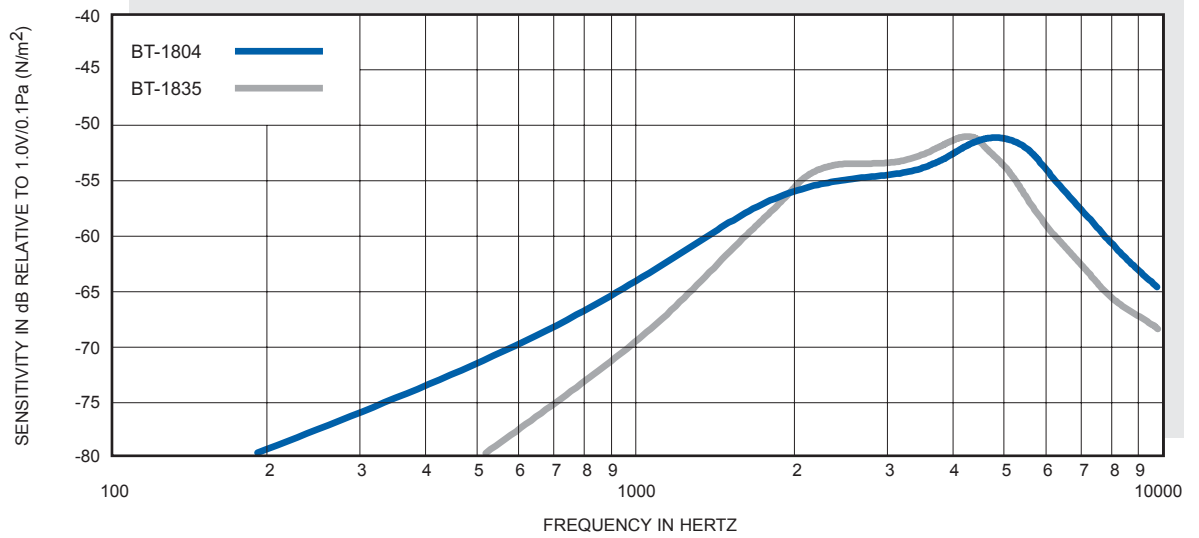


Broadband Response



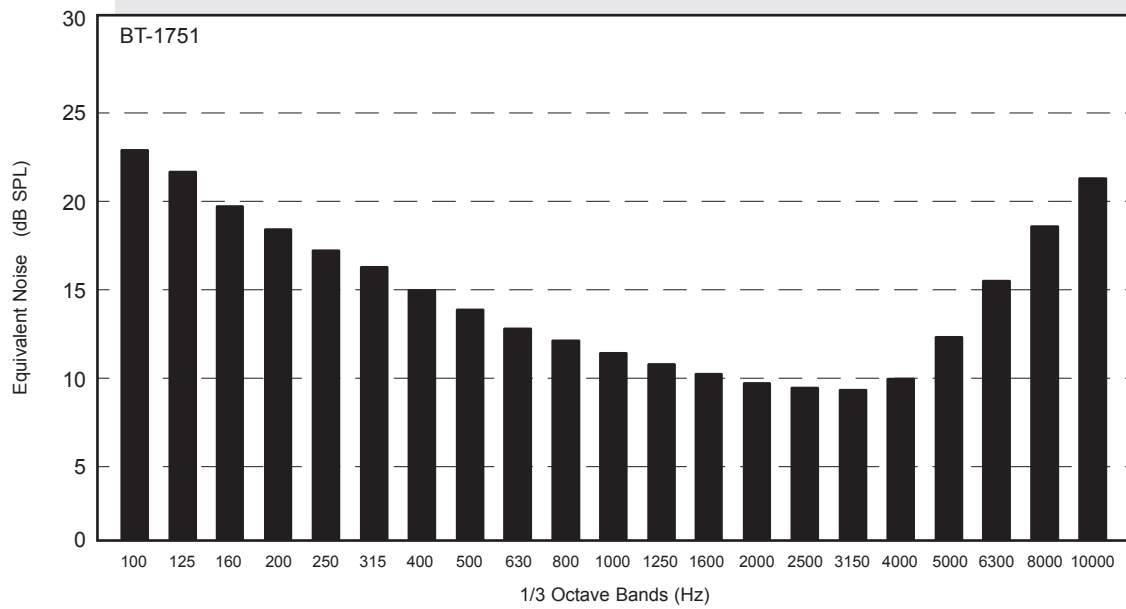
Open circuit sensitivity with 1.3VDC supply

6dB & 12dB/Octave Ski Slope Response

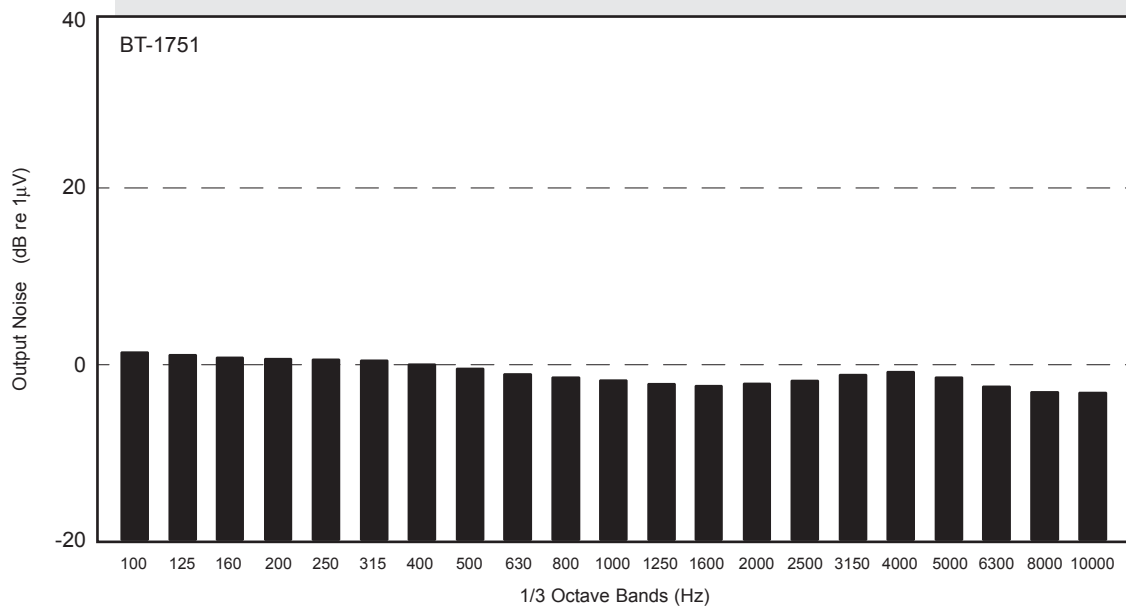


Open circuit sensitivity with 1.3VDC supply

1/3 Octave Equivalent Noise

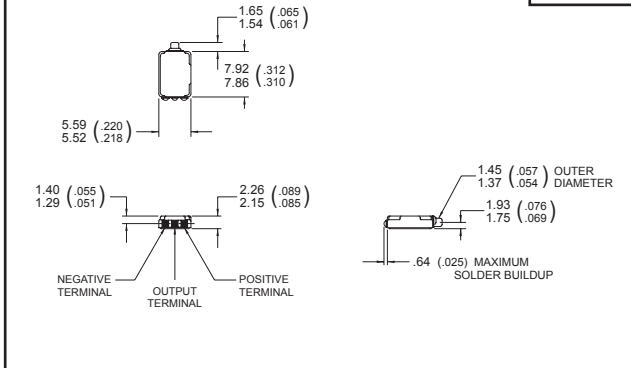


1/3 Octave Output Noise

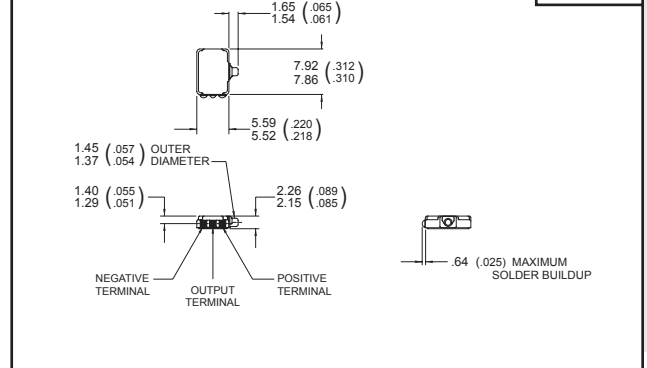


Signal Port Locations

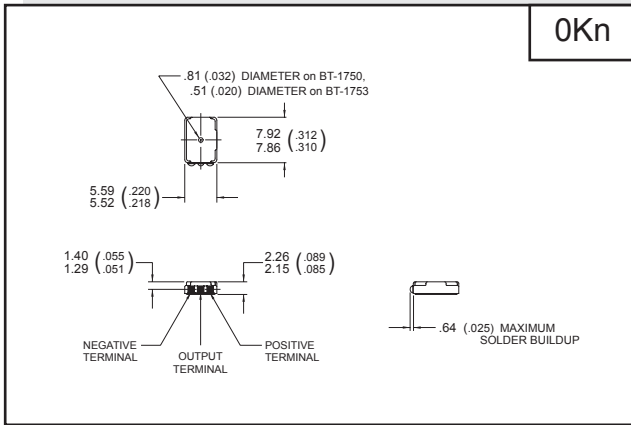
12S



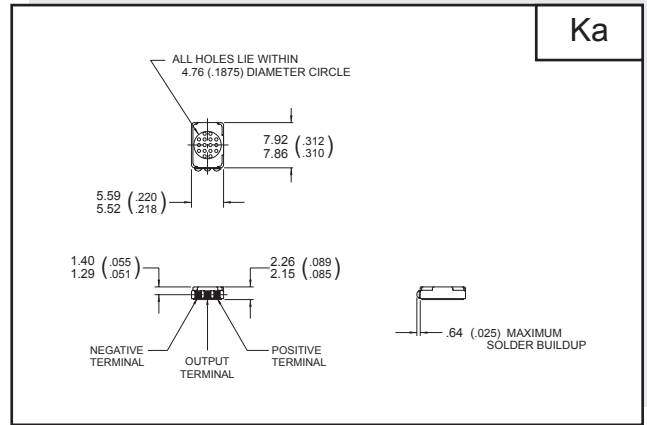
9S



0Kn



Ka



Dimensions in millimeters (inches)

BT SERIES

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NOTE: Specifications are subject to change without notice. The information on this Data Sheet reflects typical applications. Specific test specifications defining each model are available by requesting Outline Drawing Sheets 1.1 and Performance Specifications Sheets 2.1 of that model number. Knowles' responsibility is limited to compliance with the Outline Drawing and the Performance Specification application to the subject model at time of manufacture.

Knowles Electronics, Inc.