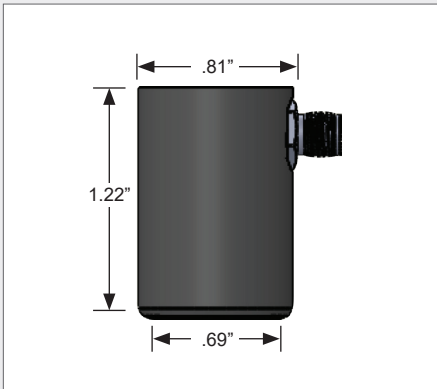


# PKBBI Sensor

Broadband Sensor Designed for Modal AE



## DESCRIPTION AND FEATURES

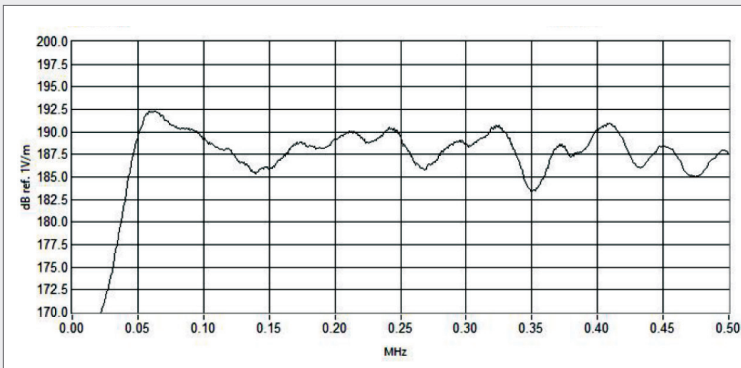
The PKBBI sensor is a broadband sensor designed for AE wave motion with high sensitivity and high signal-to-noise ratio. It offers a good, flat response to the displacement, within +/- 6 dB in the frequency range of 50 kHz to 400 kHz and an extension up to 600 kHz. It delivers high quality spectrogram for Modal AE analysis.

The PKBBI sensor is integrated with a 26 dB, low noise pre-amplifier that can drive more than 60 m (200 ft) cable.

The PKBBI sensor has a very rugged design for industrial usage and environment resistance.

## APPLICATIONS

The PKBBI sensor is especially recommended for use with Modal AE technology. This branch of AE technology investigates the AE source events by paying close attention to the wave modes in the structure and their manifestation in the sensor output. Unlike the resonant sensors, the output of the PKBBI sensor is not dominated by the resonance frequencies. Instead, it produces a signal that tracks the motion of the surface and can be analyzed to reveal the underlying movement and important characteristics of the source event including source-sensor distance.



## OPERATING SPECIFICATIONS

### Dynamic

Peak Sensitivity, Ref 1 V/m ..... 193 +/- 3 dB  
 Operating Frequency Range ..... 50-400 kHz  
 Typical Range of Sensitivity, Ref 1 V/m .....  
 ..... 181-193 dB  
 Directionality ..... +/-1.5 dB

### Environmental

Temperature Range ..... -20 to 75 °C  
 Shock Limit ..... 50 g  
 Drop Limit ..... 0.5 m to metal plate

### Physical

Dimensions ..... 0.81"OD X 1.22"H  
 ..... 20.6 mm OD X 31.0 mm H

### Electrical

Gain ..... 26 dB  
 Power Requirements ..... 4.5-8 VDC @ 5-30 mA  
 Grounding ..... Case Grounding,  
 ..... Isolated from mounting surface  
 Minimal Threshold ..... 28 dB  
 ASL ..... 18 dB

## ORDERING INFORMATION AND ACCESSORIES

PKBBI ..... PKBBI  
 Cable ..... 1234-4002-XX (In Meters),  
 ..... SMA to BNC, PLUG

### Sensors include

Characterization Certificate & Warranty

