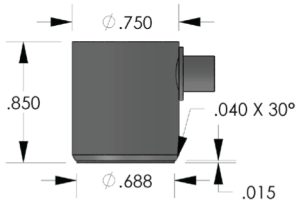


**PRODUCT DATA SHEET**

**F50α Sensor**

General Purpose Sensor



**DESCRIPTION AND FEATURES**

The F-series sensors are designed to incorporate the latest advances in materials and transducer design principles. These sensors unlike the resonant sensors (R-series) have a very high sensitivity and flat response in the bandwidth of operation. The F50A is a wideband sensor with a flat frequency response over the range of 200 – 800 kHz. This sensor is an ideal candidate for applications requiring high bandwidth for frequency analysis of the AE signals for noise discrimination and source identification. This sensor features a rugged steel construction and an SMA connector exiting from the side of the sensor.

**APPLICATIONS**

This sensor is well suited for structural health monitoring of large structures like storage tanks, pipelines etc. Flat response of these sensors help eliminate the sharp rise and fall in the sensitivity with frequency commonly seen in resonant sensors, providing additional information for engineers to analyze. Wideband sensors are well suited for research applications where a high fidelity AE response is required. It can be easily mounted using epoxy.

**OPERATING SPECIFICATIONS**

*Dynamic*

Peak Sensitivity, Ref V/(m/s) ..... 65 dB  
 Peak Sensitivity, Ref V/μbar ..... -65 dB  
 Operating Frequency Range ..... 200-800 kHz  
 Resonant Frequency, Ref V/(m/s) ..... 100 kHz  
 Directionality ..... +/-1.5 dB

*Environmental*

Temperature Range ..... -65 to 177°C  
 Shock Limit ..... 500 g  
 Completely enclosed crystal for RFI/EMI immunity

*Physical*

Dimensions ..... 0.75"OD X 0.85"H  
 19 mm OD X 21.6 mm H  
 Weight ..... 34 grams  
 Case Material ..... Stainless steel  
 Face Material ..... Ceramic  
 Connector ..... SMA  
 Connector Locations ..... Side

**ORDERING INFORMATION AND ACCESSORIES**

F50α ..... F50α or F50a  
 Cable (specify length in 'm') ..... 1232-X-SMA  
 Magnetic Hold-Down ..... MHR15A  
 Pre-amplifier ..... 0/2/4, 2/4/6

*Sensors include*

NIST Calibration Certificate & Warranty

