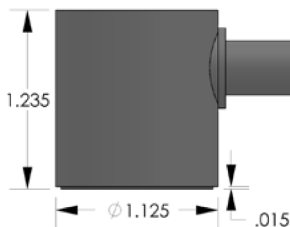


**PRODUCT DATA SHEET**

**F50I-AST Sensor**

Integral Preamplifier Sensor

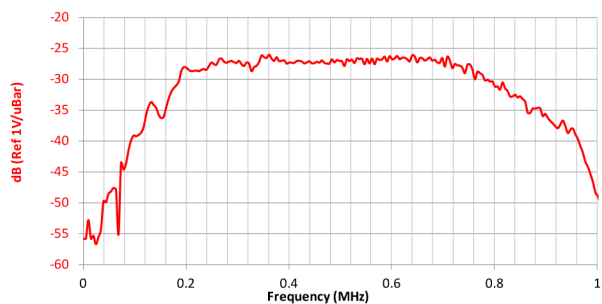


**DESCRIPTION AND FEATURES**

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 F50I is an integral preamplifier 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).....	96 dB
Peak Sensitivity, Ref V/μbar.....	-25 dB
Operating Frequency Range.....	200-800 kHz
Resonant Frequency, Ref V/(m/s).....	100 kHz
Directionality.....	+/-1.5 dB

*Environmental*

Temperature Range.....	-35 to 75°C
Shock Limit.....	500 g
Completely enclosed crystal for RFI/EMI immunity	

*Physical*

Dimensions.....	1.125"OD X 1.235"H
	28.5 mm OD X 31.4 mm H
Weight.....	70 grams
Case Material.....	Stainless steel
Face Material.....	Ceramic
Connector.....	BNC
Connector Locations.....	Side

*Electrical*

Gain.....	40 dB
Power Requirements.....	20-30 VDC @ 25 mA
Dynamic Range.....	> 87 dB
Noise Level (RMS RTI).....	< 3 μV
Output Drive Impedance.....	50 Ω
Grounding.....	Case Grounding, Isolated from mounting surface

**ORDERING INFORMATION AND ACCESSORIES**

F50I-AST.....	F50I-AST
Cable (specify length in 'm').....	1234-X
Magnetic Hold-Down.....	MHR15A
Pre-amplifier.....	0/2/4, 2/4/6

*Sensors include*

NIST Calibration Certificate & Warranty

