

**PRODUCT DATA SHEET**

## R50S Sensor

### General Purpose Sensor

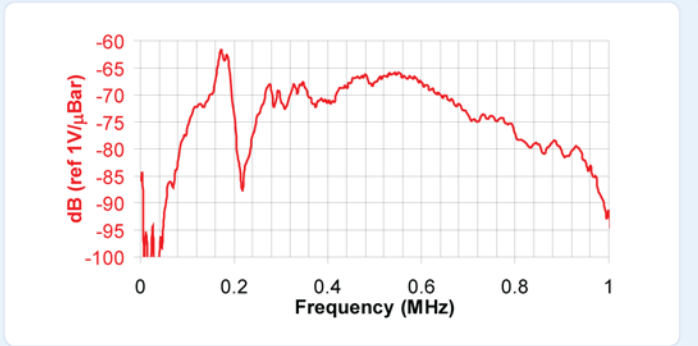
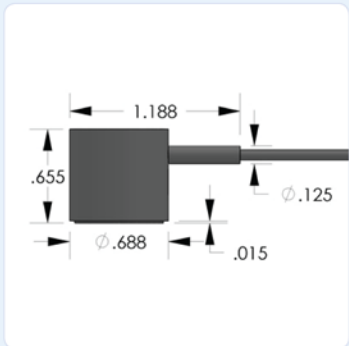


#### DESCRIPTION AND FEATURES

R50S is designed as a narrow band sensor to have a very high sensitivity to AE signals. It has a very good frequency response over the range of 100 – 700 kHz. This sensor features a rugged steel construction with an integrated coaxial cable exiting from the side with a BNC connector. The small size of the sensor makes it particularly suitable for mounting in tight spaces.

#### APPLICATIONS

This sensor is well suited for structural health monitoring of large structures like storage tanks, pipelines etc. Narrow band sensors are well suited for applications requiring the sensor to pick up low level AE signals. It can be easily mounted using epoxy.



#### OPERATING SPECIFICATIONS

##### Dynamic

Peak Sensitivity, Ref V/(m/s) ..... 62 dB  
 Peak Sensitivity, Ref V/μbar ..... -62 dB  
 Operating Frequency Range ..... 100-700 kHz  
 Resonant Frequency, Ref V/(m/s) ..... 100 kHz  
 Resonant Frequency, Ref V/μbar ..... 500 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 ..... 0.7"OD X 0.65"H  
 18 mm OD X 17 mm H  
 Weight ..... 20 grams  
 Case Material ..... Stainless steel  
 Face Material ..... Ceramic  
 Connector ..... BNC  
 Connector Locations ..... Side

#### ORDERING INFORMATION AND ACCESSORIES

R50S ..... R50S  
 Cable (specify length 'XX' m at end of PN) ..... 1 m  
 Magnetic Hold-Down ..... MHSTD  
 Pre-Amplifier ..... 0/2/4, 2/4/6  
 Amplifier subsystems ... AE2A, AE5A or standard AE systems  
 Preamp to System Cable (specify length in 'm') ..... 1234-X

##### Sensors include

NIST Calibration Certificate & Warranty

