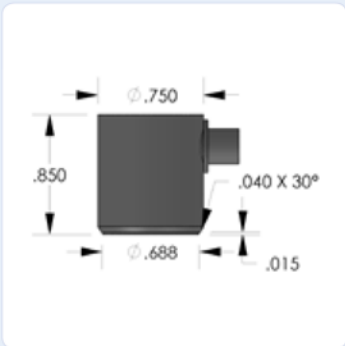


PRODUCT DATA SHEET

WS α Sensor

General Purpose Wideband Sensor



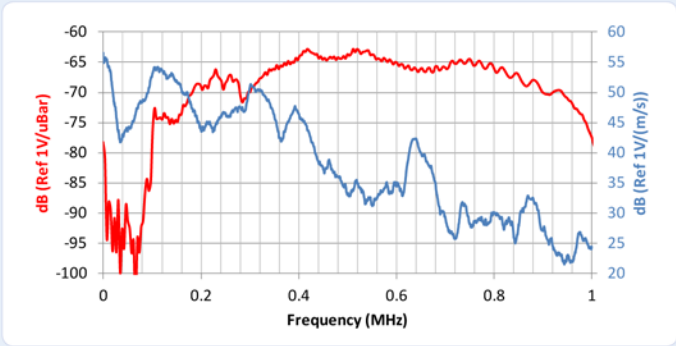
DESCRIPTION AND FEATURES

The WS α sensor is a single-ended, wideband frequency, Acoustic Emission sensor. Featuring a SMA connector within an integrated stainless steel cavity, the WS α is machined from a solid rod. A 30-degree angle at the bottom edge of the sensor cavity reduces the risk of electric shorts from the sensor cavity to conductive test surfaces.

The WS α takes advantage of the general Alpha series (consisting of R3 α , R6 α , R15 α , R30 α , R50 α , R80 α and WS α sensors) sensor features and the WD sensor's high sensitivity and wideband frequency range.

APPLICATIONS

Wideband sensors are typically used in research applications or other applications where a high fidelity AE response is required. In research applications, wideband AE sensors are useful where frequency analysis of the AE signal is required and in helping determine the predominant frequency band of AE sources for noise discrimination and selection of a suitable lower cost, general purpose AE sensor. In high fidelity applications, various AE wavemodes can be detected using wideband sensors, providing more information about the AE source and distance of the AE event.



OPERATING SPECIFICATIONS

Dynamic

Peak Sensitivity, Ref V/(m/s).....	55 dB
Peak Sensitivity, Ref V/ μ bar.....	-62 dB
Operating Frequency Range.....	100-1000 kHz
Resonant Frequency, Ref V/(m/s).....	125 kHz
Resonant Frequency, Ref V/ μ bar.....	650 kHz
Directionality.....	+/-1.5 dB

Environmental

Temperature Range.....	-65 to 175°C
Shock Limit.....	500 g
Completely enclosed crystal for RFI/EMI immunity	

Physical

Dimensions.....	0.75"OD X 0.84"H 19 mm OD X 21.4 mm H
Weight.....	32 grams
Case Material.....	Stainless Steel
Face Material.....	Ceramic
Connector.....	SMA
Connector Locations.....	Side
Seal.....	Epoxy
Sensor to Preamp Cable (1 or 2 meters).....	1232-X-SMA

ORDERING INFORMATION AND ACCESSORIES

WS α	WS α or WS α
Cable (specify length in 'XX' m).....	1234-SMA/BNC-X
Magnetic Hold-Down.....	MHR15A
Preamplifier.....	0/2/4, 2/4/6
Preamp to System Cable (specify length in 'm').....	1234 - X

Sensors include

NIST Calibration Certificate & Warranty

