



CRY3281

1/2" Free-field External-polarized High-frequency Microphone

Features

- **Key Specifications**

Sensitivity	12.5 mV/Pa
Dynamic Range	23 dBA to 160 dB
Frequency Range	3.15 Hz to 40 kHz ± 2 dB

- **Applications**

High-frequency (ultrasonic) measurements
High-definition speakers, headphones, and earbud measurements
High sound pressure level (SPL) measurements

- **Standards**

IEC 61094 4:1995 Measurement microphones - Part 4

Introduction

CRY3281 is a 1/2" externally polarized measurement microphone designed for high-frequency and high-dynamic-range acoustic measurements.

The unique design of CRY3281 allows for a flat frequency response, with a measurement frequency range of up to 40 kHz. It can withstand sound pressure levels as high as 160 dB, making it suitable for high-definition audio measurements and other ultrasonic acoustic applications.

Highlights

- **Use of High-frequency Free-field Microphones**

High-frequency microphones can accurately capture high frequency sounds and are highly suitable for ultrasonic detection, high-frequency acoustic research, and other similar applications.

Free-field microphones are specifically designed for measurements in environments that are free from reflections or echoes and are widely used in fields such as acoustic research, noise monitoring, and sound system testing.

- **Calibration**

Each CRY SOUND microphone is calibrated at the factory using traceable calibration equipment. Calibration certificates are provided with each unit. CRY SOUND recommends recalibration at least once a year.

- **Quality & Warranty**

All CRY SOUND microphone capsules use 3rd generation titanium diaphragms and protection grids and synthetic sapphire insulators - resulting in the most rugged and reliable measurement microphones on the market. Titanium provides superior corrosion resistance, high temperature stability, impact resistance and strength-to-mass than traditional nickel and stainless steel. All capsules are assembled in strict clean-room environments for maximum quality.

CRY SOUND microphones are supported by a 10-year warranty—offering one of the best service guarantee in the world.

Technical Specifications

Specifications

Field Type	Free-field
Sensitivity(± 1.5 dB)	12.5 mV/Pa, -38 dB re 1V/Pa
Frequency Response	3.15 Hz to 40 kHz ± 2 dB
Polarization Voltage	200 V
Capacitance	13 pF (@250 Hz)
Dynamic Range(re.20uPa)	23 dBA to 160 dB
Operating Temperature	-30°C to +80°C (-4°F to +140°F)
Temperature Stability	0.005 dB/°C (-10°C to +50°C) 0.003 dB/°F (+14°F to +122°F)
Static Pressure Stability	-0.01 dB/kPa
Operating Humidity Range	0 to 90%RH no condensation
Humidity Stability	< 0.1 dB (0 to 90%RH no condensation)
Pressure Equalization Vent	Rear vented
IEC 61094-4 Type	WS2F

Dimensions

Height with Grid	12.7 mm (0.500")
Diameter with Grid	13.2 mm (0.520")

Ordering Information

Optional Accessories

Electrostatic Actuator	TA0302 1/2" IEPE Electrostatic Actuator
Power Supply	CRY575 Three-channel Microphone Power Supply
Electroacoustic Analyzer	CRY6151B Electroacoustic Analyzer

Drawings(mm)[inch]

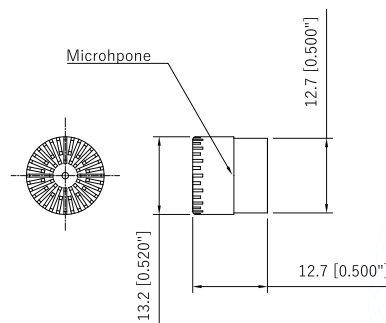


Fig.1 CRY3281 Microphone Drawings

Frequency Response

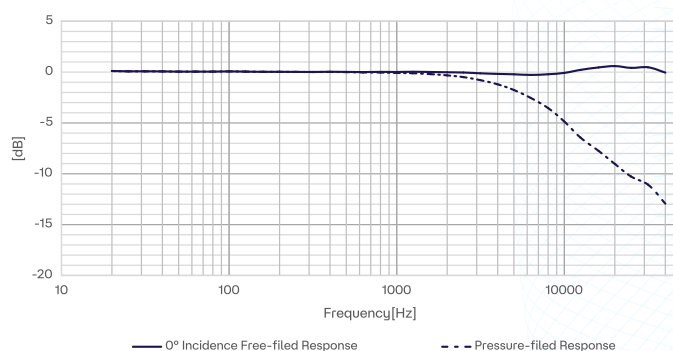


Fig.2 CRY3281 Microphone Typical Frequency Response

Related Products

CRY3282	1/2" pressure-field ex-polarized wide-frequency microphone, 12.5 mV/Pa, 3.15 Hz-20kHz, 23 dBA-160 dB
CRY3284	1/2" pressure-field ex-polarized high-sensitivity microphone, 50 mV/Pa, 3.15 Hz-10 kHz, 16 dBA-146 dB
CRY3285	1/2" free-field ex-polarized high-sensitivity microphone, 50 mV/Pa, 3.15 Hz-20kHz, 16 dBA-146 dB
CRY3482	1/4" pressure-field ex-polarized ultra-high frequency microphone, 1.6 mV/Pa, 4 Hz-70kHz, 45dB-170 dB
CRY3485	1/4" free-field ex-polarized high-frequency microphone, 4 mV/Pa, 4 Hz-90kHz, 35dBA-165dB