GRAS 46BG-FV

1/4" CCP Pressure Front Vented Microphone Set, High Pressure





Freq range: 3.15 Hz to 70 kHz Dyn range: 60 dB(A) to 184 dB Sensitivity: 0.25 mV/Pa The GRAS 46BG-FV is a front-vented 1/4" CCP pressure microphone set for measuring very high sound pressure levels.



Technology

Introduction

46BG-FV is a front-vented version of the GRAS 46BG 1/4" CCP Pressure Standard Microphone Set, High Pressure. Apart from the venting, these microphone sets are identical. Learn more here.

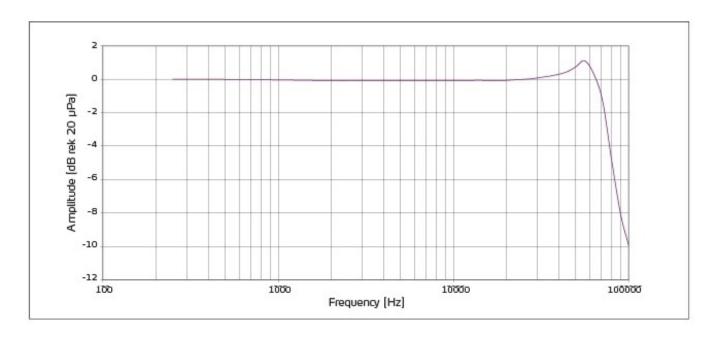


Specifications

| Polarization/Connection 0 V / CCP Frequency range (±2 dB) Hz 3.15 to 70 k Dynamic range lower limit with GRAS preamplifier dB(A) 60 Dynamic range upper limit with GRAS CCP preamplifier dB 184 Set sensitivity @ 250 Hz (±2 dB) mV/Pa 0.25 Set sensitivity @ 250 Hz (±2 dB) dB re 1V/Pa - 72 Output limpedance Ω <50 Output Voltage Swing, min. @ 24-28 V CCP voltage supply Vp 8 Power supply min. to max. mA 2 to 20 Power supply min. to max. (single/balanced) V N/A DC bias voltage, typ. V 12 Microphone venting Front Front IEC 61094-4 Designation WS3P Temperature range, operation °C / °F -30 to 85 / -22 to 185 Temperature range, storage °C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/kPa -0.01 / -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 | | | |
|--|---|---------------|------------------------|
| Dynamic range lower limit with GRAS preamplifier Dynamic range upper limit with GRAS CCP preamplifier dB 184 Set sensitivity @ 250 Hz (±2 dB) mV/Pa 0.25 Set sensitivity @ 250 Hz (±2 dB) dB re 1V/Pa -72 Output impedance Ω <so (ieee="" (single="" *c="" *f="" *r="" -0.006="" -0.01="" -22="" -30="" -40="" 0="" 0.001="" 10="" 12="" 1451.4)="" 185="" 2="" 20="" 24-28="" 32="" 61094-4="" 63="" 85="" 90="" @="" @1="" @250="" a="" axial="" b="" balanced)="" bias="" ccp="" ce="" coefficient="" compliant="" condensing="" connector="" db="" dc="" designation="" humidity="" hz="" iec="" influence="" m="" ma="" max.="" microdot="" microphone="" min.="" n="" non="" of="" operation="" output="" power="" pressure="" range="" range,="" re="" registered<="" rh="" rohs="" static="" storage="" supply="" swing,="" s²="" td="" teds="" temperature="" to="" typ.="" type="" utid="" v="" venting="" vibration="" voltage="" voltage,="" vp="" w="" weee="" μpa=""><td>Polarization/Connection</td><td></td><td>0 V / CCP</td></so> | Polarization/Connection | | 0 V / CCP |
| Dynamic range upper limit with GRAS CCP preamplifier dB 184 Set sensitivity @ 250 Hz (±2 dB) mV/Pa 0.25 Set sensitivity @ 250 Hz (±2 dB) dB re 1V/Pa -72 Output impedance Ω | Frequency range (±2 dB) | Hz | 3.15 to 70 k |
| Set sensitivity @ 250 Hz (±2 dB) mV/Pa 0.25 Set sensitivity @ 250 Hz (±2 dB) dB re 1V/Pa - 72 Output impedance Ω <50 | Dynamic range lower limit with GRAS preamplifier | dB(A) | 60 |
| Set sensitivity @ 250 Hz (±2 dB) Output impedance Ω Set sensitivity @ 250 Hz (±2 dB) Output Voltage Swing, min. @ 24-28 V CCP voltage supply Power supply min. to max. mA 2 to 20 N/A Power supply min. to max. (single/balanced) V N/A DC bias voltage, typ. V 12 Microphone venting IEC 61094-4 Designation Temperature range, operation °C / °F -30 to 85 / -22 to 185 Temperature range, storage °C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/°C / dB/°F -0.01 / -0.006 Static pressure coefficient @250 Hz Humidity range non condensing WRH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 μPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered | Dynamic range upper limit with GRAS CCP preamplifier | dB | 184 |
| Output impedance Ω <50 | Set sensitivity @ 250 Hz (±2 dB) | mV/Pa | 0.25 |
| Output Voltage Swing, min. @ 24-28 V CCP voltage supply Vp 8 Power supply min. to max. mA 2 to 20 Power supply min. to max. (single/balanced) V N/A DC bias voltage, typ. V 12 Microphone venting Front Front IEC 61094-4 Designation WS3P Temperature range, operation °C / °F -30 to 85 / -22 to 185 Temperature range, storage °C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/°C / dB/°F -0.01 / -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 μPa 63 TEDS UTID (IEEE 1451.4) 27 v. 1.0 Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered Yes/Yes/Yes | Set sensitivity @ 250 Hz (±2 dB) | dB re 1V/Pa | - 72 |
| Power supply min. to max. Power supply min. to max. (single/balanced) Power supply min. to max. (single/balanced) V N/A DC bias voltage, typ. V 12 Microphone venting Front IEC 61094-4 Designation WS3P Temperature range, operation °C / °F -30 to 85 / -22 to 185 Temperature range, storage °C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/°C / dB/°F -0.01/ -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 µPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered | Output impedance | Ω | <50 |
| Power supply min. to max. (single/balanced) DC bias voltage, typ. V 12 Microphone venting IEC 61094-4 Designation Temperature range, operation °C / °F -30 to 85 / -22 to 185 Temperature range, storage °C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/°C / dB/°F -0.01 / -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 µPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 Yes/Yes/Yes | Output Voltage Swing, min. @ 24-28 V CCP voltage supply | Vp | 8 |
| DC bias voltage, typ. WY 12 Microphone venting Front IEC 61094-4 Designation **C / °F -30 to 85 / -22 to 185 Temperature range, operation **C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz ### dB/**C / dB/**F -0.01 / -0.006 Static pressure coefficient @250 Hz #### dB/**RH #### 0 to 90 ################################### | Power supply min. to max. | mA | 2 to 20 |
| Microphone venting IEC 61094-4 Designation WS3P Temperature range, operation °C / °F -30 to 85 / -22 to 185 Temperature range, storage °C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/°C / dB/°F -0.01 / -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 µPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered | Power supply min. to max. (single/balanced) | V | N/A |
| IEC 61094-4 Designation "C / °F -30 to 85 / -22 to 185 Temperature range, operation "C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/°C / dB/°F -0.01 / -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 μPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered | DC bias voltage, typ. | V | 12 |
| Temperature range, operation °C / °F -30 to 85 / -22 to 185 Temperature range, storage °C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/°C / dB/°F -0.01 / -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 µPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered | Microphone venting | | Front |
| Temperature range, storage °C / °F -40 to 85 / -40 to 185 Temperature coefficient @250 Hz dB/°C / dB/°F -0.01 / -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 μPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered | IEC 61094-4 Designation | | WS3P |
| Temperature coefficient @250 Hz dB/°C / dB/°F -0.01 / -0.006 Static pressure coefficient @250 Hz dB/kPa -0.01 Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 µPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered | Temperature range, operation | °C / °F | -30 to 85 / -22 to 185 |
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| Humidity range non condensing % RH 0 to 90 Humidity coefficient @250 Hz dB/% RH 0.001 Influence of axial vibration @1 m/s² dB re 20 μPa 63 TEDS UTID (IEEE 1451.4) 27 v. 1.0 Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered Yes/Yes/Yes | Temperature coefficient @250 Hz | dB/°C / dB/°F | -0.01 / -0.006 |
| Humidity coefficient @250 Hz Influence of axial vibration @1 m/s² dB re 20 μPa 63 TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered Yes/Yes/Yes | Static pressure coefficient @250 Hz | dB/kPa | -0.01 |
| Influence of axial vibration @1 m/s² TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered Yes/Yes/Yes | Humidity range non condensing | % RH | 0 to 90 |
| TEDS UTID (IEEE 1451.4) Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered Yes/Yes/Yes | Humidity coefficient @250 Hz | dB/% RH | 0.001 |
| Connector type Microdot 10/32 CE/RoHS compliant/WEEE registered Yes/Yes/Yes | Influence of axial vibration @1 m/s² | dB re 20 μPa | 63 |
| CE/RoHS compliant/WEEE registered Yes/Yes/Yes | TEDS UTID (IEEE 1451.4) | | 27 v. 1.0 |
| | Connector type | | Microdot 10/32 |
| Weight q / oz 8 / 0.282 | CE/RoHS compliant/WEEE registered | | Yes/Yes/Yes |
| 3. | Weight | g / oz | 8 / 0.282 |



Specifications

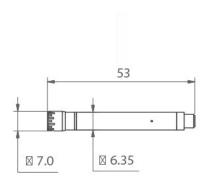


Typical pressure frequency response of the 46BG

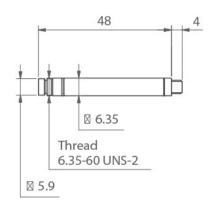
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Dimensions



Dimensions in mm





Ordering Info

Optional items

| <u>GRAS AA0070</u> | 3 m Microdot - BNC Cable |
|--------------------|--|
| GRAS AL0029 | 1/4" Microphone Holder, POM |
| GRAS AL0013 | 1/4" Microphone Holder, Stainless Steel |
| GRAS AL0005 | Swivel head |
| GRAS AL0006 | Tripod |
| GRAS RA0022 | 1/4" Nosecone |
| <u>GRAS AM0071</u> | Windscreen for 1/4" Microphones |
| GRAS RA0127 | Rain-protection cap for 1/4" microphones |
| GRAS 12AL | 1-Channel CCP Power Module with A-weighting filter |
| GRAS 12AQ | 2-Channel Universal Power Module with signal conditioning and PC interface |
| GRAS 42AG | Multifunction Sound Calibrator, Class 1 |
| GRAS 42AP | Intelligent Pistonphone, Class 0 |
| | |

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GRAS Worldwide

Subsidiaries and distributors in more than 40 countries

HEAD OFFICE, DENMARK

GRAS SOUND & VIBRATION

Skovlytoften 33 2840 Holte Denmark Tel: +45 4566 4046 www.GRASacoustics.com gras@grasacoustics.com

USA

GRAS SOUND & VIBRATION

9290 SW Nimbus Avenue Beaverton, OR 97008 Tel: 503-627-0832 Toll Free: 800-231-7350 www.GRASacoustics.com sales-usa@grasacoustics.com

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GRAS SOUND & VIBRATION

Unit 115, Gibson House, Ermine Business Park, Huntingdon, Cambridgeshire, PE29 6XU Tel: +44 (0) 7762 584 202 www.GRASacoustics.com sales-uk@grasacoustics.com

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GRAS SOUND & VIBRATION

Room 315, RuiBo Center(T1) Lane683, Shenhong Rd, Minhang District, Shanghai, China, 201107 Tel: +86 21 64203370 www.GRASacoustics.cn cnsales@grasacoustics.com



About GRAS Sound & Vibration

GRAS is a worldwide leader in the sound and vibration industry. We develop and manufacture state-of-the-art measurement microphones and related equipment for industries where acoustic measuring accuracy and repeatability are of the utmost importance. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, consumer electronics and other highly demanding industries. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect, trust and require.

GRAS Sound & Vibration is represented through subsidiaries and distributors in more than 40 countries and is part of Axiometrix Solutions, a leading test solutions provider comprised of globally recognized measurement brands. Read more at www.grasacoustics.com

