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Bose®
FreeSpace® 3-II
system

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BOSE PROFESSIONAL SYSTEMS DIVISION – COMPLETE COMMERCIAL SOLUTIONS

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Bose® FreeSpace® 3-II system



TECHNICAL INFORMATION

FREESPACE 3-II SYSTEM

Frequency range

50 Hz to 16 kHz (± 3 dB)

System components

- FreeSpace 3-II Acoustimass® module
70V/100V/6 ohm (25W, 50W,
100W, 200W taps in mono or 6 Ω ;
100W in mono or stereo)
PC 029386 white - one per box
PC 029686 black - one per box
- FreeSpace 3 satellite speaker
(surface-mount with bracket)
PC 025596 white - two per box
PC 025595 black - two per box
- FreeSpace 3F satellite speaker
(flush-mount)
PC 029387 white - two per box
PC 029827 black - two per box

Sensitivity¹

82dB-SPL @ 1W, 1 m (pink noise)

Maximum acoustic output

93dB-SPL average in a 45,000 ft³
room, with an RT₆₀ of 1 second, ± 3 dB

Long-term power handling⁴

70/100V: 200W continuous
Low impedance: 100W continuous

Nominal impedance

2-satellite and 4-satellite, direct:
6 Ω per channel

FREESPACE 3-II ACOUSTIMASS MODULE (FS3B)

Frequency range

50 Hz to 210 Hz (± 3 dB)

Sensitivity¹

76dB @ 1W, 1 m (pink noise) per channel
79dB-SPL @ 1W, 1 m (pink noise) mono

Maximum acoustic output²

96dB-SPL @ 1 m (pink noise and IEC³ noise)
per channel
102dB-SPL @ 1 m (pink noise and IEC noise)

Long-term power handling⁴

70/100V: 200W continuous (mono)
Low impedance: 50W per channel
stereo or 100W mono, continuous

Nominal impedance

Direct: 6 Ω

Dispersion

Omnidirectional

Mechanical specifications

Dimensions:

15.4" (39.1 cm) outer flange diameter;
14.25" (36.1 cm) ceiling hole diameter;
7.5" (19.01 cm) height to top of housing

Weight: 14 lb (6.36 kg)

Fuses/protection: internal over-power
protection

FREESPACE 3-II SATELLITES

Frequency range

210 Hz to 16 kHz (± 3 dB)

Sensitivity¹

84dB-SPL @ 1W, 1 m (pink noise)

Maximum acoustic output²

95dB-SPL @ 1 m (pink noise)
95dB-SPL @ 1 m (pink noise)

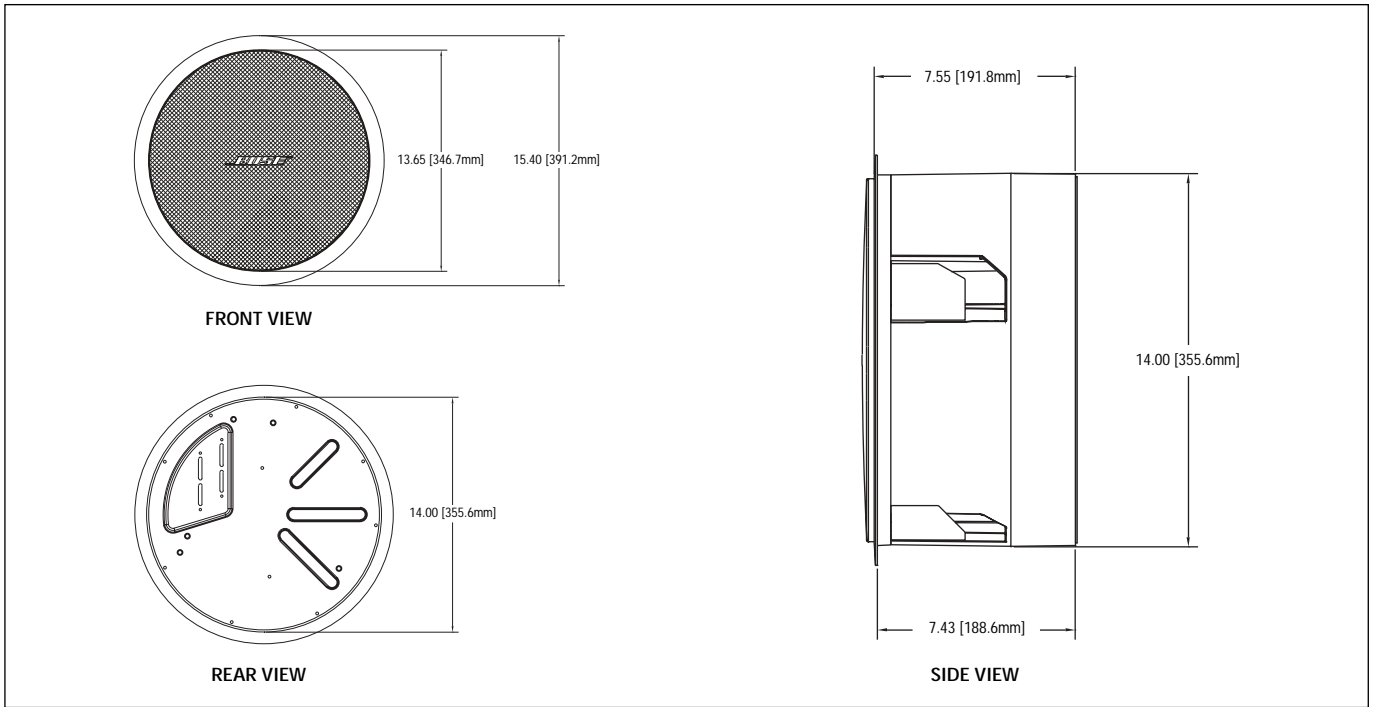
¹ Full bandwidth pink noise is amplified to a level at the loudspeaker terminals corresponding to 1W as referenced to the nominal impedance. The average sound pressure level (dB-SPL) is measured at 1 metre from the speaker in an anechoic environment.

² Full bandwidth pink noise is amplified to a level at the loudspeaker terminals corresponding to the long-term rated power handling of the speaker. The average sound pressure level (dB-SPL) is measured at 1 metre from the speaker in an anechoic environment.

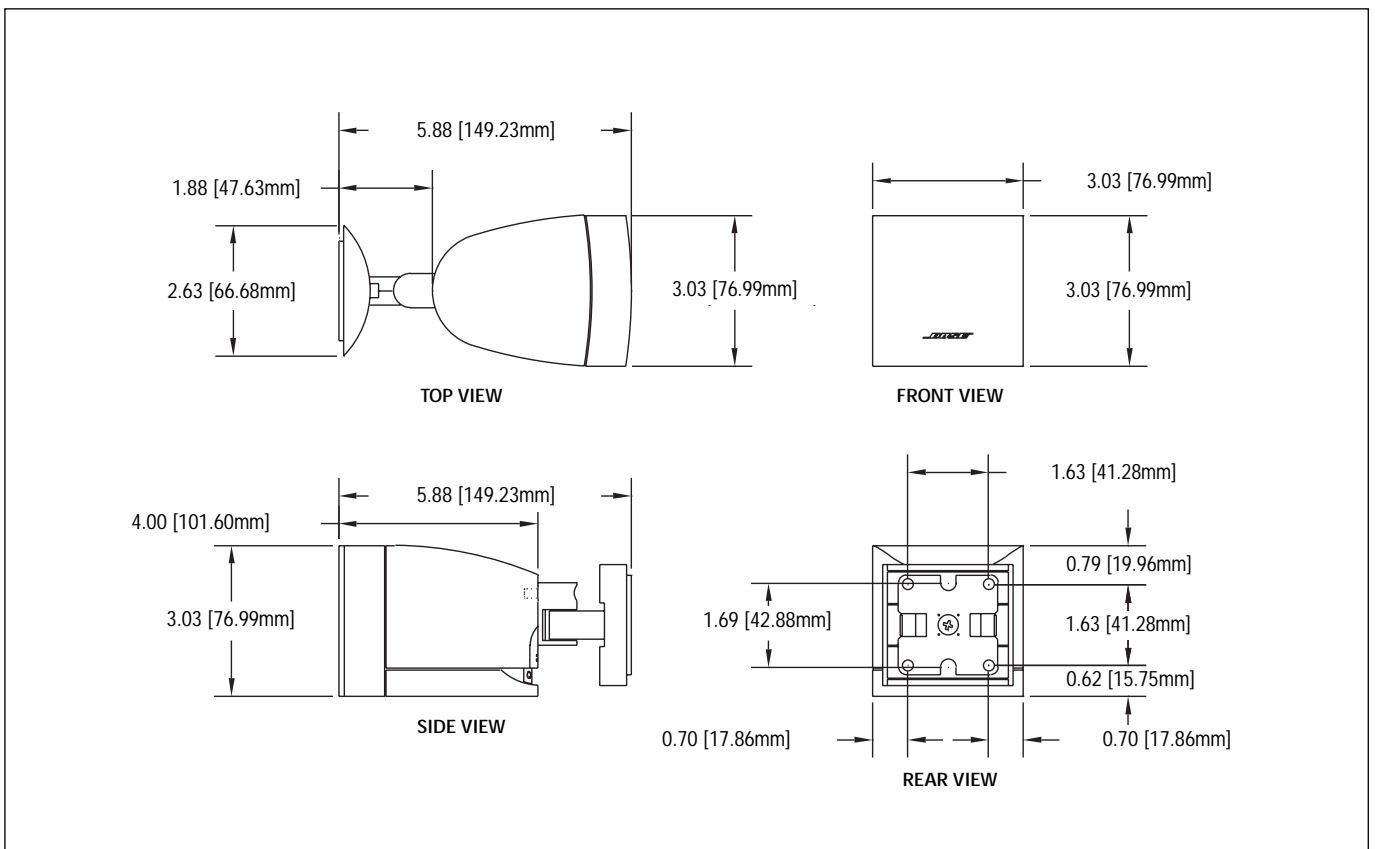
³ Full bandwidth pink noise, meeting International Electrotechnical Commission (IEC) Standard #268-5, with a spectrum corresponding to average program material.

⁴ Full bandwidth noise, meeting the IEC Standard #268-5 is amplified to a level at the loudspeaker terminals corresponding to the power handling of the loudspeaker. The loudspeaker must show no visible damage or measurable loss of performance after 100 hours of continuous testing.

FREESPACE 3 ACOUSTIMASS MODULE (FS3B)



FREESPACE 3 SURFACE-MOUNT SATELLITE



Dispersion (-6dB point, average,
1-4 kHz)
170° conical

Long-term power handling⁴
12W continuous

Nominal impedance
6Ω

Surface-mount version only:

Mechanical specifications

Dimensions: 3.0"H x 3.0"W x 4.0"D
(7.7 cm x 7.7 cm x 10.2 cm)

Weight: 1.75 lb (0.8 kg)

Connectors: guillotine

Mounting hardware included: wall-mount
brackets

Bracket angles: ±30° pitch, ±90° yaw

Enclosure construction: high-impact
polystyrene

Flush-mount (FS3F) version only:

Mechanical specifications

Dimensions: 6.2" (15.7 cm) outer flange
diameter; 5.0" (12.7 cm) ceiling hole
diameter; 5.0" (12.7 cm) to top of housing

Weight: 1.9 lb (0.9 kg)

Connectors: 2-position terminal block

Mounting hardware included: integral quick-
install mounting features

Additional mounting points: tab for seismic
chain or safety cable

Enclosure construction: PC/ABS rated at UL94
5VA, with expanded metal grille

Optional system accessories

- PC 029854 - FS3B tile bridge required for use with tile ceilings, 6 pack
 - PC 029855 - FS3B rough-in pan for flush mounting in hard ceilings or walls, 6 pack
 - PC 029829 - FS3B surface mount kit, white, one per box
 - PC 029828 - FS3B surface mount kit, black, one per box
 - PC 030100 - FS3B pendant mount kit, white, one per box
 - PC 030099 - FS3B pendant mount kit, black, one per box
- The pendant-mount kit offers a suspension cable, eye screws for cable installation, and a cosmetic cover for the speaker.
- PC 0301146 PC-FS3B plenum cover for the FreeSpace 3 flush Acoustimass module. It fits over the back of the speaker to better comply with codes for air-handling spaces, one per box
 - PC 026363 - 8/32 junction box (for use with the FS3B or FS3F rough-in pan), 6 pack
 - PC 029832 - FS3F tile bridge recommended for use with tile ceilings, 6 pack
 - PC 029853 - FS3F rough-in pan for flush mounting in hard ceilings or walls, 6 pack
 - PC 030098 - FS3F cosmetic covers for use when pendant mounting, two per box, white
 - PC 030097 - FS3F cosmetic covers for use when pendant mounting, two per box, black
 - PC 031145 PC-FS3F plenum cover for the FreeSpace 3 flush satellite. Fits over the back of the speaker to comply with codes for air-handling spaces, 6 pack

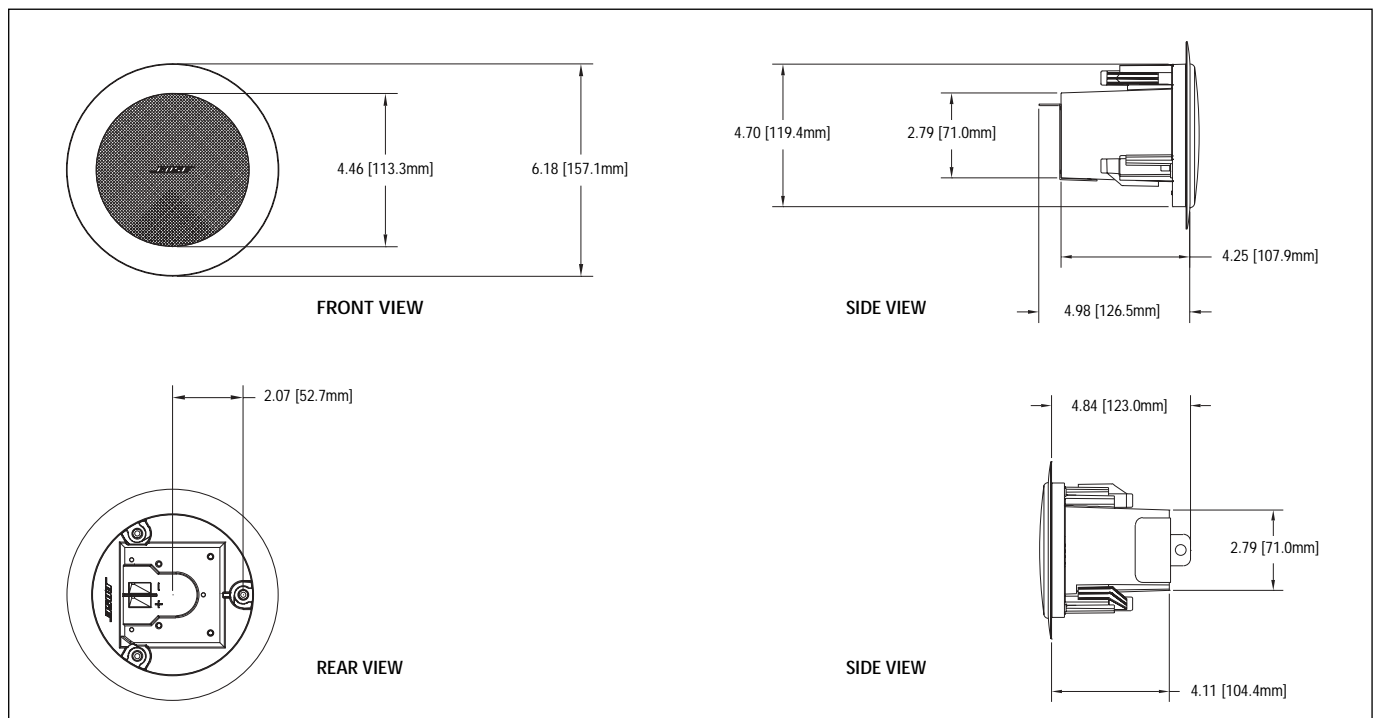
GENERAL DESCRIPTION

The Bose FreeSpace 3-II system is a high performance, Virtually Invisible® system engineered for a wide range of business applications including retail, restaurant, and hospitality operations.

The product provides the following features:

- High fidelity, extended bandwidth reproduction of voice and music over a wide dispersion area
- Aesthetic styling for elegant surface- and flush-mount installations
- The ceiling-mount bass module can be used with other systems to provide full, deep bass
- Versatile mix-and-match system components for all project needs:
 - Multi-purpose bass module design for simple flush, surface, or pendant mounting
 - Module design allowing for the flexibility of two or four satellites per bass module, and parallel connection of multiple bass modules
 - Choice of surface satellites with included brackets, or flush- or pendant-mount satellites with integral mounting features
 - Proprietary PC/ABS enclosure to provide durability with less weight
 - When used with plenum cover, plenum-rated for use in air-handling spaces
 - All components available in black and white, with plastic and metal surfaces that can be painted with latex or oil-based paint
 - Bose accessories available for integrated installation

FREESPACE 3 FLUSH-MOUNT SATELLITE (FS3F)



- Operation with 70V, 100V or low impedance amplifier output
- Transformer tap adjustment with settings under the grille

INSTALLATION

Product installation instructions are included with the loudspeakers.

A full complement of accessories, for ease and versatility of installation, is available from Bose.

For mounting in a tile ceiling, a tile bridge is required for the Acoustimass module and is available for the FS3F satellite speaker. Rough-in pans are available for flush-mounting in hard ceilings or walls (and required for installing the module that way). The Bose 8/32 junction box may be used with the rough-in pan or tile bridge for pre-wiring that meets local building codes.

For pendant-mounting in an open ceiling, the FS3B pendant-mount kit offers a suspension cable, eye bolts for cable installation, and a cosmetic cover for the module. For the FS3F satellite speakers, an optional cosmetic cover can be used in conjunction with solid conduit attached to the satellite rear cover.

An optional surface-mount kit for the module provides a wall- or ceiling-mount bracket and cosmetic cover that converts the series II module into a surface-mount speaker. The surface-mount satellite speakers include mounting brackets that allow for easy installation and aiming at $\pm 30^\circ$ pitch and $\pm 90^\circ$ yaw.

The FS3F and FS3B plenum covers allow each loudspeaker to meet fire codes for installing in air-handling spaces.

Note: This product is equipped with a protection circuit that reduces the volume to a very low level when over-powered. In the event that the protection circuit is activated, turn off the signal source for 30 seconds for full recovery.

LOUDSPEAKER CONFIGURATION

The FreeSpace 3 loudspeaker system consists of a flush-mount Acoustimass module plus two to four satellite speakers of flush- or surface-mount design. The module may also be mounted on the surface of a wall or ceiling using the optional surface-mount kit.

The module alone may be used for bass augmentation with other Bose speakers, such

as the FreeSpace model 16, model 32, model 32SE or FreeSpace 6 loudspeakers.

With loudspeakers other than the FreeSpace 3 satellites, the module must have a separate amplifier channel and must not connect to the other speakers.

Detailed installation and setup instructions are provided in the Bose FreeSpace 3-II loudspeaker system installation guide found on the website <http://pro.bose.com>.

ENGINEERS' AND ARCHITECTS' SPECIFICATIONS

The loudspeaker system shall be a 200W ported loudspeaker system that includes one Acoustimass module and two or four satellite speakers. It shall be capable of producing 93dB-SPL average in a 45,000 ft³ room with an RT₆₀ of 1 second in a range of 50 Hz to 16 kHz (± 3 dB).

The module shall have one 5.25" (13.3 cm) dual voice coil low-frequency driver. The module shall have an input impedance of 6 Ω for direct connection to unequalised low-impedance amplifier sources.

The system shall be configured for use with either a 70/100V input or a low-impedance input. The transformer shall offer multiple taps of 25W, 50W, 100W, and 200W.

Each satellite speaker shall have one 2.5" (6.3 cm) full-range driver. The nominal average dispersion shall be 170° at -6dB.

The input connectors shall consist of multi-position screw-type barriers on the Acoustimass module, a two-position guillotine connector on the flush-mount satellite, and a two-position screw-type barrier on the surface-mount satellite. Wire jumpers for transformer settings shall be provided. Removable covers shall shield all bass module input and jumper connections.

The Acoustimass module shall have dimensions of 15.4" (39.1 cm) outer flange diameter; 14.25" (36.1 cm) ceiling hole diameter; and 7.5" (19.0 cm) height to top of housing. It shall weigh 14 lb (6.36 kg).

Each surface-mount satellite shall measure 3.0"H x 3.0"W x 4.0"D (7.7 cm x 7.7 cm x 10.2 cm) and shall weigh 1.75 lb (0.8 kg).

Each flush-mount satellite speaker shall measure 6.2" (15.7 cm) outer flange diameter; 5.0" (12.7 cm) ceiling hole diameter; and 5.0" (12.7 cm) to top of housing. It shall weigh 1.9 lb (0.9 kg).

The loudspeaker module and flush-mount satellite enclosures shall be composed of PC/ABS with an expanded metal grille and shall meet plenum ratings when used with a plenum cover. The surface-mount satellite shall have a cloth grille and black or white polymer finish.

The loudspeaker shall be the Bose FreeSpace 3-II loudspeaker system.

SAFETY AND REGULATORY COMPLIANCE

The Bose FreeSpace 3-II loudspeakers have passed extensive testing and comply with the following specifications and uses:

UL1480 listed:

- General-purpose use, UL category UEAY, file number S 5591

Air-handling spaces (ceiling plenums), FS3 module and flush-mount satellite:

- UL-2043 When used with the PC-FS3F and PC-FS3B plenum cover accessories
- NFPA-70 national electric code 2002, article 300-22(c)
- NFPA-90-A-1996 Installation of air conditioning and ventilation systems, section 2-3.10.1(a), exception 3

EMC directive 89/336/EEC and article 10 (1) of the directive, EN50081-1, and EN50082-1, as signified by the CE mark.

WARRANTY INFORMATION

The Bose FreeSpace 3-II loudspeaker system is covered by a five-year transferable limited warranty.

Subject to change without notice.

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