TOA

F Series
Ceiling Speakers

F-122CU
F-1522SC
F-2322C
F-2352C
F-2352SC
F-2852C

TOA F SERIES CEILING SPEAKERS are ideal for music and paging applications such as audio/visual, business music or retail sound systems. The new lineup consists of six models with features and price points to suit premium-to-economy applications; all built with the same high quality and reliability the industry has come to expect from TOA products. Key benefits include smooth off-axis coverage, versatile range of models, ease of installation, and competitive pricing.

For premium wide-dispersion performance, the new F-122CU is a 5" full-range processed ceiling speaker, UL1480/2043-Listed for Fire Protective, General Purpose Signaling and Air-Handling Spaces. Other new full-range models include the F-2322C with 5" full-range driver and the ultra-compact F-1522SC with 4" full-range driver.

Three new two-way co-axial models include the F-2852C with 6.5" cone driver, the F-2352C with 5" cone driver and the economy F-2352SC with 5" cone driver. Each model has a special diffusor with built-in dome tweeter for superior co-axial performance.

The F-122CU, F-2322C, F-2352C and F-2852C all include integral metal back-cans with safety cable, quick-mount hardware and removable Phoenix-style connectors with loop-through points for adjacent speakers. Built-in overload protection circuitry ensures outstanding reliability.

All six new models include built-in multi-tap transformers with 8/16 ohm direct modes, front baffle power tap selection and double-locking, paintable grilles.

Accessories include HY-TB1 tile bridge rails, HY-TR1 trim ring and HY-BC1 surface back-can.

The F Series ceiling speakers are individually packaged and backed with a five year warranty.

Related Products

BG-M Series Mixer/Amplifiers
BS-1030 Wall/Ceiling-Mount Box Speaker
FB-100 Corner-Mount Subwoofer
HB-1 In-Wall Subwoofer

Highlights

- Superior Sound Quality
- Wide-Dispersion, Smooth Off-Axis Coverage
- Fast And Easy Installation
- UL-Listed And Compliant Models
- Built-In 25/70.7 V Multi-Tap Transformer
- Low Impedance Mode (8/16 Ohms)
- Convenient Power Tap Selector On Front Baffle
- Integral Metal Back-Can And Safety Cable
- Low-Profile, Paintable Grille
- Overload Protection Circuitry
- Mounting Hardware Included
- Competitive Pricing
- Individually Packaged
- Five Year Warranty

F-122CU
FULL-RANGE PROCESSED CEILING SPEAKER (5")
- UL1480/2043-Listed
- 5" full-range driver
- Wide-dispersion: 180° (1-4k Hz avg.)
- Optimized equalization with model E-03R module or AC-120 processor
- Power Handling: 30 W (xfmr) / 120 W (8 ohms)

F-2352C
CO-AXIAL CEILING SPEAKER (5")
- Co-axial: 5" cone driver and dome tweeter
- Wide-dispersion: 170° conical (1-4k Hz avg.)
- Power Handling: 30 W (xfmr) / 120 W (8 ohms)

F-2852C
CO-AXIAL CEILING SPEAKER (6.5")
- Extended bass response
- Co-axial: 6.5" cone driver and dome tweeter
- Wide-dispersion: 120° conical (1-4k Hz avg.)
- Power Handling: 60 W (xfmr) / 180 W (8 ohms)

F-2322C
FULL-RANGE CEILING SPEAKER (5")
- 5" full-range driver
- Wide-dispersion: 170° conical (1-4k Hz avg.)
- Power Handling: 30 W (xfmr) / 120 W (8 ohms)

F-2352SC
LOW POWER CO-AXIAL CEILING SPEAKER (5")
- Co-axial: 5" cone driver and dome tweeter
- Wide-dispersion: 155° conical (1-4k Hz avg.)
- Power Handling: 6 W (xfmr) / 18 W (8 ohms)

F-1522SC
COMPACT FULL-RANGE CEILING SPEAKER (4")
- 4" full-range driver
- Wide-dispersion: 160° conical (1-4k Hz avg.)
- Power Handling: 6 W (xfmr) / 18 W (8 ohms)

WIDE-DISPERSION

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Fax: 800-733-9766
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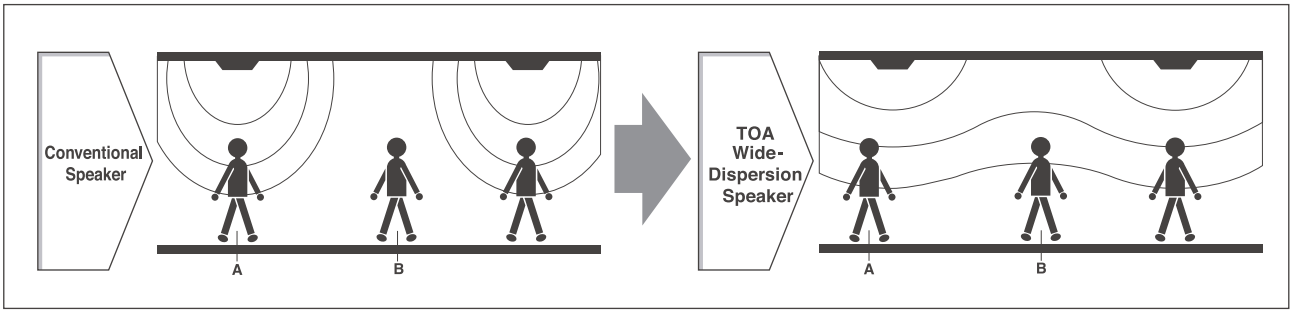
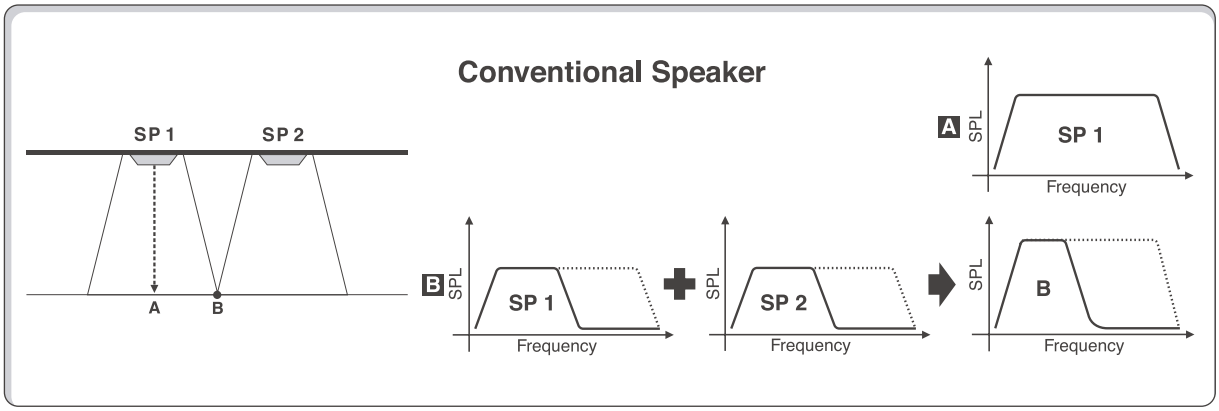
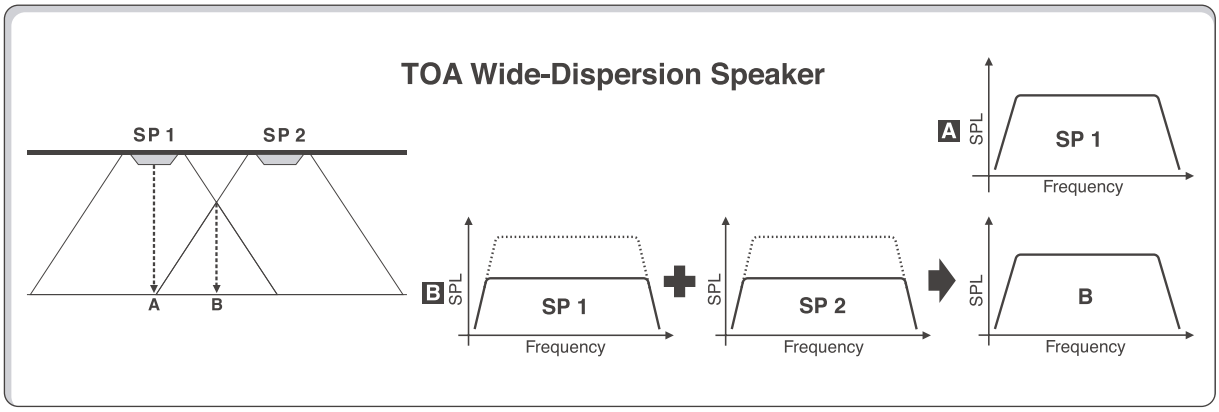


Conventional ceiling speakers typically exhibit pronounced high frequency roll-off as you move away (off-axis) from the area directly beneath the speaker (on-axis) resulting in "dead spots" between speakers, poor intelligibility and on-axis "hot spots". The TOA F Series ceiling speakers provide up to 180° of high frequency coverage allowing you to use fewer speakers for the most cost-effective installation.





APPLICATIONS

Airports
Audio/Visual
Bars / Lounges / Nightclubs
Convention Centers
Corporate Boardrooms
Hotels / Hospitality
Houses of Worship
Museums
Offices
Patios
Residential Spaces
Restaurants
Retail Stores
Schools
Theaters
Theme Parks

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F SERIES
CEILING SPEAKERS

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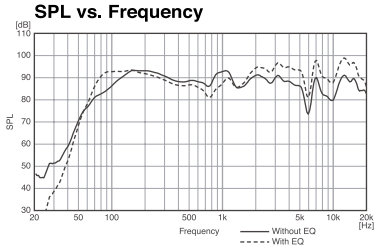
F-122CU
5" Full-Range, 30 W

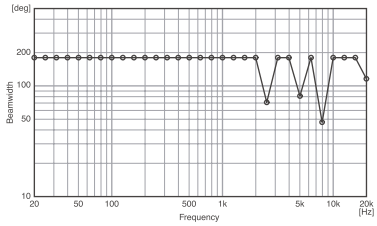
FULL-RANGE PROCESSED CEILING SPEAKER (5")

- Ideal for applications requiring premium sound quality
- Special diffuser provides wide off-axis high frequency response
- UL-Listed for Fire Protective, General Purpose Signaling and Air-Handling Spaces (UL1480 UUMW/UEAY, UL2043)
- Ported bass-reflex design
- 5" full-range driver
- Wide-dispersion: 180° (1-4k Hz avg.)
- Frequency Response: 70 to 20k Hz
- Sensitivity: 90 dB SPL (1 W, 1 m)
- Continuous Power Handling: 120 W
- Built-in 25/70.7 V transformer (30 W max.) with 8/16 ohm direct modes
- Convenient power tap selector on front baffle
- Integral metal back-can and safety cable
- Removable terminal block with loop-through terminations
- Low-profile, paintable grille
- Overload protection circuitry
- Mounting C-ring included
- Optimized equalization with E-03R module or AC-120 dual channel processor
- Optional HY-TB1 tile rails, HY-BC1 surface-mount back-can and HY-TR1 trim ring
- Five year warranty

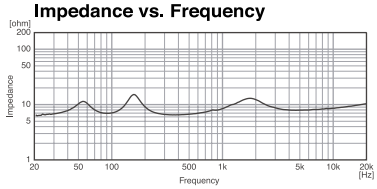
SPL vs. Frequency



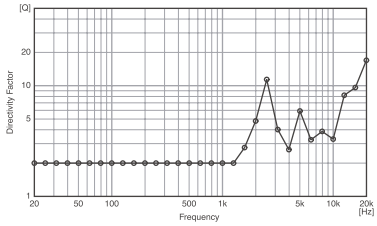
Beamwidth vs. Frequency



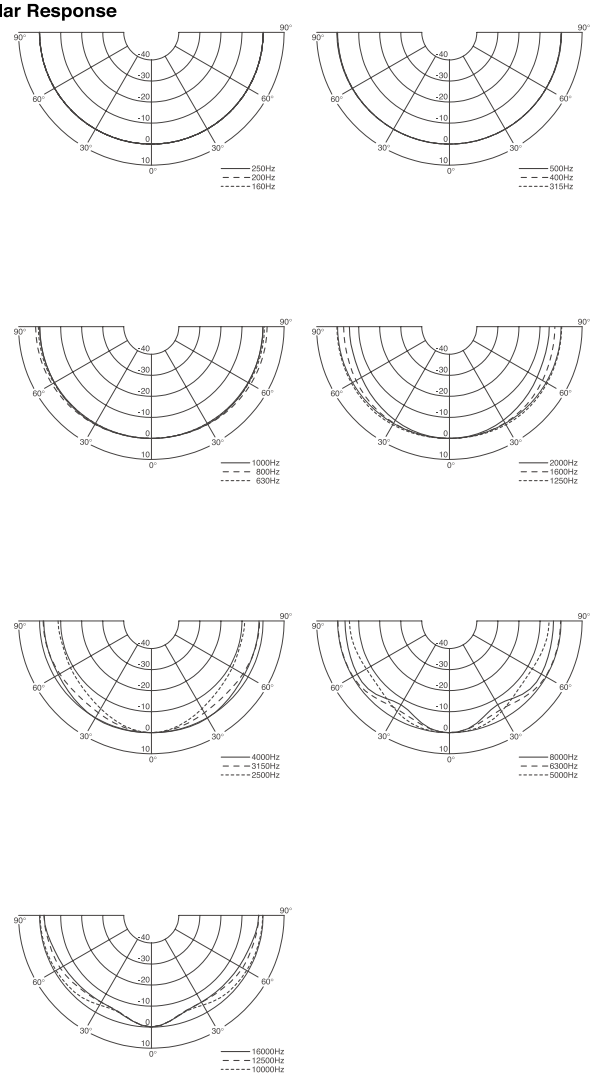
Impedance vs. Frequency



Directivity Factor vs. Frequency



Polar Response



F-2352C
5" Co-axial, 30 W

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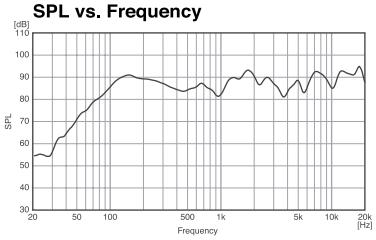
TOA

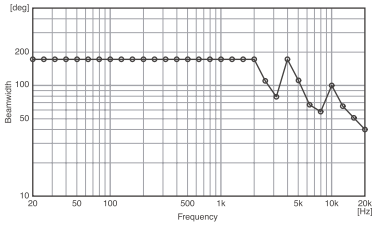
CO-AXIAL CEILING SPEAKER (5")

- Special diffuser provides wide off-axis high frequency response
- Ported bass-reflex design
- Co-axial: 5" cone driver and dome tweeter
- Wide-dispersion: 170º conical (1-4k Hz avg.)
- Frequency Response: 70 to 20k Hz
- Sensitivity: 90 dB SPL (1 W, 1 m)
- Continuous Power Handling: 120 W (8 ohms)
- Built-in 25/70.7/100 V transformer (30 W max.) with 8/16 ohm direct modes
- Convenient power tap selector on front baffle
- Metal back-can and safety cable
- UL Compliant for Air-Handling Spaces (UL2043)
- Removable terminal block with loop-through terminations
- Low-profile, paintable grille
- Overload protection circuitry
- Mounting C-ring included
- Optional HY-TB1 tile rails, HY-BC1 surface-mount back-can and HY-TR1 trim ring
- Five year warranty

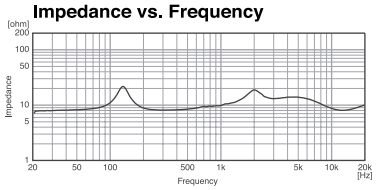
SPL vs. Frequency



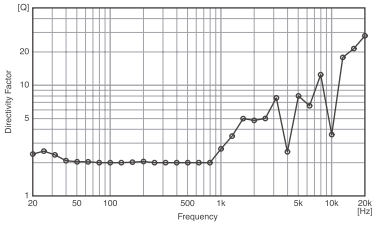
Beamwidth vs. Frequency



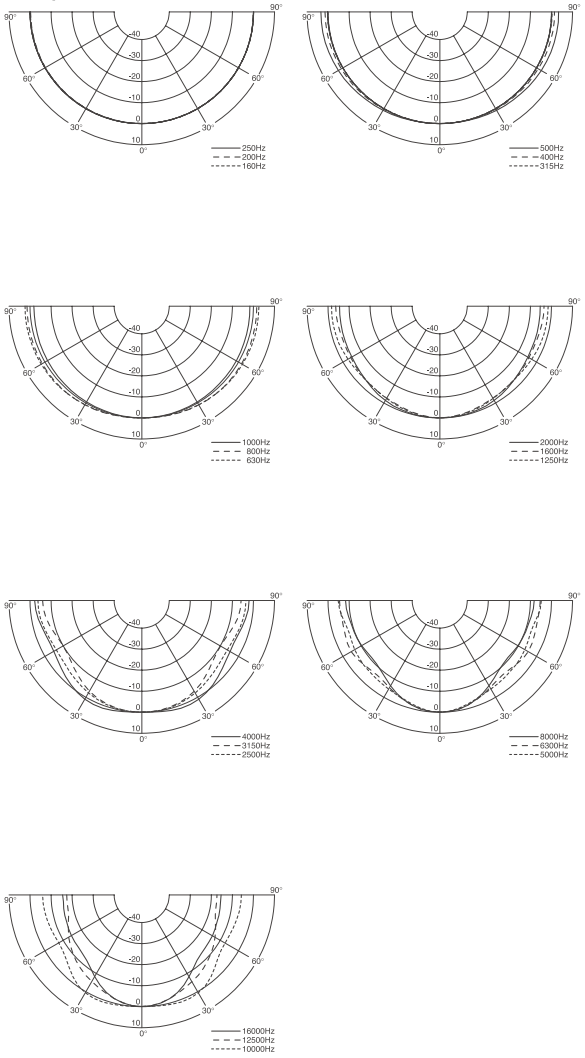
Impedance vs. Frequency



Directivity Factor vs. Frequency



Polar Response



F SERIES
CEILING SPEAKERS

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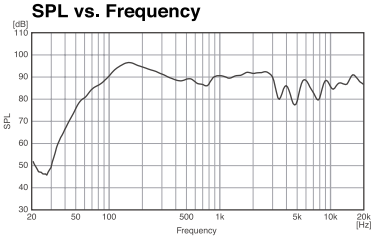
F-2852C
6.5" Co-axial, 60 W

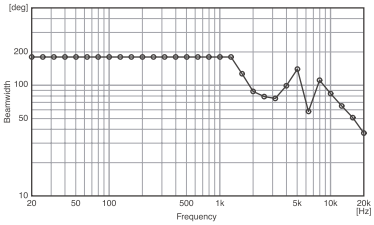
CO-AXIAL CEILING SPEAKER (6.5")

- Ideal for high ceiling applications
- Special diffuser provides wide off-axis high frequency response
- Ported bass-reflex design
- Co-axial: 6.5" cone driver and dome tweeter
- Wide-dispersion: 120º conical (1-4k Hz avg.)
- Frequency Response: 60 to 20k Hz
- Sensitivity: 91 dB SPL (1 W, 1 m)
- Continuous Power Handling: 180 W (8 ohms)
- Built-in 25/70.7/100 V transformer (30 W max.) with 8/16 ohm modes
- Convenient power tap selector on front baffle
- Metal back-can and safety cable
- UL Compliant for Air-Handling Spaces (UL2043)
- Removable terminal block with loop-through terminations
- Low-profile, paintable grille
- Overload protection circuitry
- Mounting C-ring included
- Optional HY-TB1 tile rails
- Five year warranty

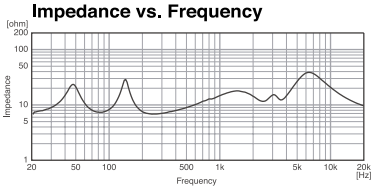
SPL vs. Frequency



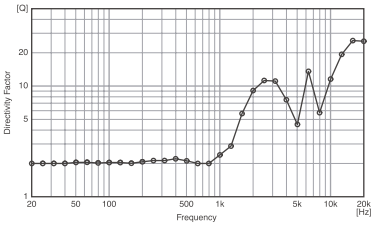
Beamwidth vs. Frequency



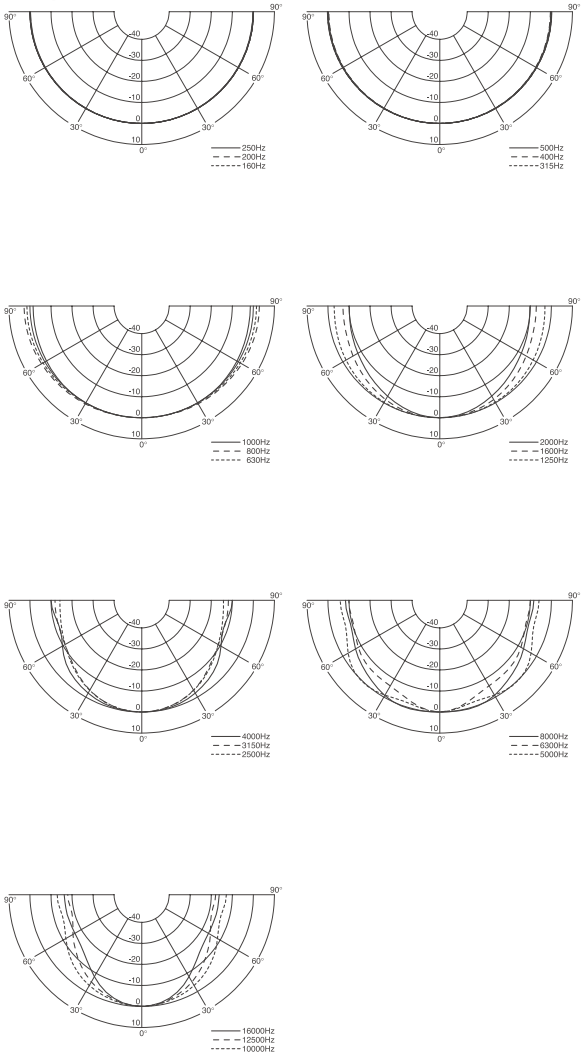
Impedance vs. Frequency



Directivity Factor vs. Frequency



Polar Response



F-2322C
5" FULL-RANGE, 30 W

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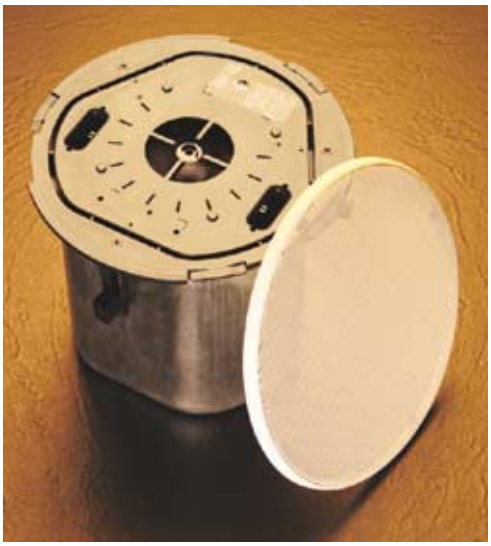
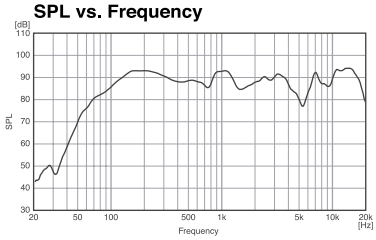


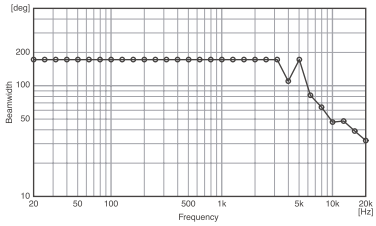
FULL-RANGE CEILING SPEAKER (5")

- Ported bass-reflex design
- 5" full-range driver
- Frequency Response: 70 to 20k Hz
- Wide-dispersion: 170º conical (1-4k Hz avg.)
- Sensitivity: 90 dB SPL (1 W, 1 m)
- Continuous Power Handling: 120 W (8 ohms)
- Built-in 25/70.7/100 V transformer (30 W max.) with 8/16 ohm direct modes
- Convenient power tap selector on front baffle
- Metal back-can and safety cable
- UL Compliant for Air-Handling Spaces (UL2043)
- Removable terminal block with loop-through terminations
- Low-profile, paintable grille
- Overload protection circuitry
- Mounting C-ring included
- Optional HY-TB1 tile rails, HY-BC1 surface-mount back-can and HY-TR1 trim ring
- Five year warranty

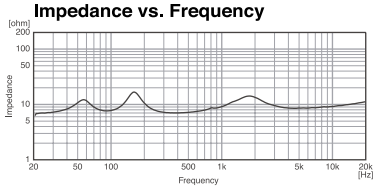
SPL vs. Frequency



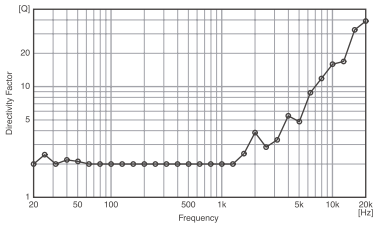
Beamwidth vs. Frequency



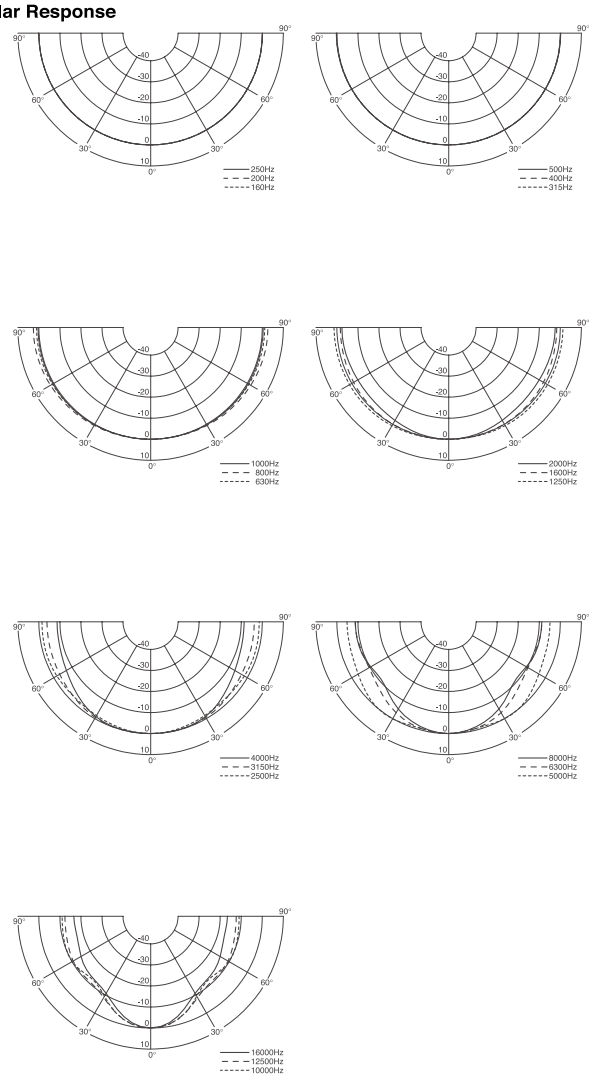
Impedance vs. Frequency



Directivity Factor vs. Frequency



Polar Response



F SERIES
CEILING SPEAKERS

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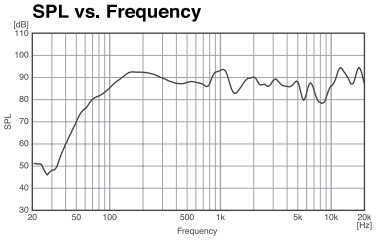
F-2352SC
5" Co-axial, 6 W

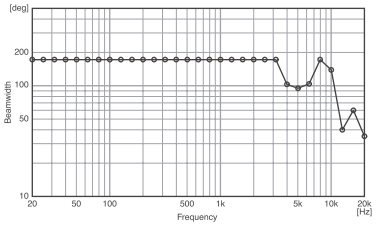
LOW POWER CO-AXIAL CEILING SPEAKER (5")

- Special diffuser provides wide off-axis high frequency response
- Co-axial: 5" cone driver and dome tweeter
- Wide-dispersion: 155º conical (1-4k Hz avg.)
- Frequency Response: 80 to 20k Hz
- Sensitivity: 89 dB SPL (1 W, 1 m)
- Continuous Power Handling: 18 W (8 ohms)
- Built-in 25/70.7/100 V transformer (6 W max.) with 8/16 ohm direct modes
- Convenient power tap selector on front baffle
- Four pole push-terminal input connector
- Low-profile, paintable grille
- Dust cover to protect components
- Optional HY-BC1 surface-mount back-can and HY-RR2 mounting C-ring
- Five year warranty

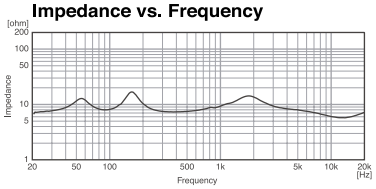
SPL vs. Frequency



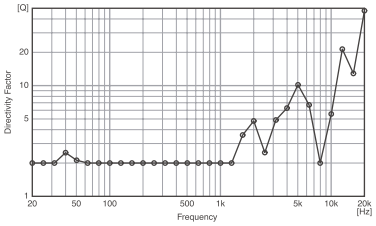
Beamwidth vs. Frequency



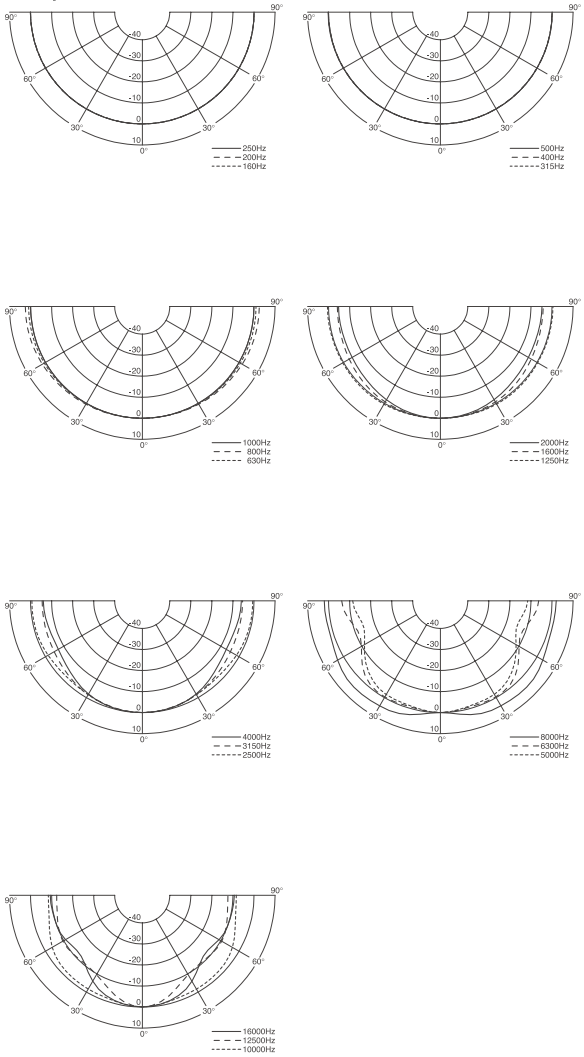
Impedance vs. Frequency



Directivity Factor vs. Frequency



Polar Response



F-1522SC
4" FULL-RANGE, 6 W

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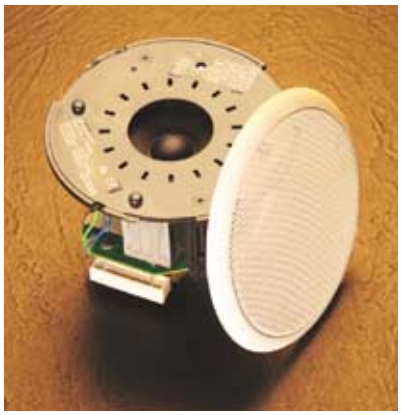
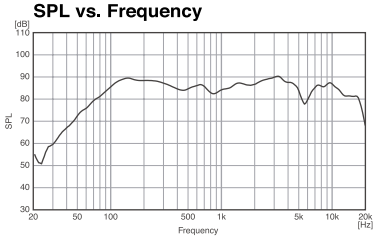


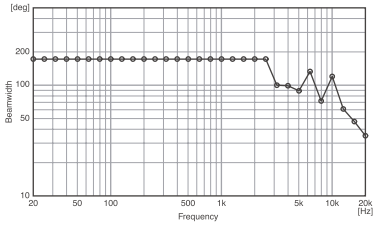
COMPACT FULL-RANGE CEILING SPEAKER (4")

- Ultra-compact – only 4.2" (106 mm) deep!
- 4" full-range driver
- Wide-dispersion: 160º conical (1-4k Hz avg.)
- Frequency Response: 65 to 18k Hz
- Sensitivity: 88 dB SPL (1 W, 1 m)
- Continuous Power Handling: 18 W
- Built-in 25/70.7/100 V transformer (6 W max.) with 8/16 ohm direct modes
- Convenient power tap selector on front baffle
- Four pole push-terminal input connector
- Low-profile, paintable grille
- Dust cover to protect components
- Optional HY-RR1 mounting C-ring
- Five year warranty

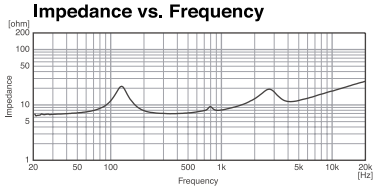
SPL vs. Frequency



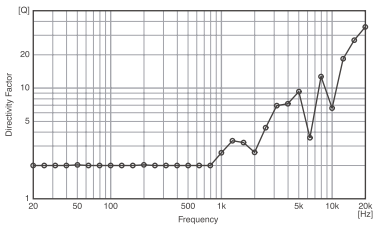
Beamwidth vs. Frequency



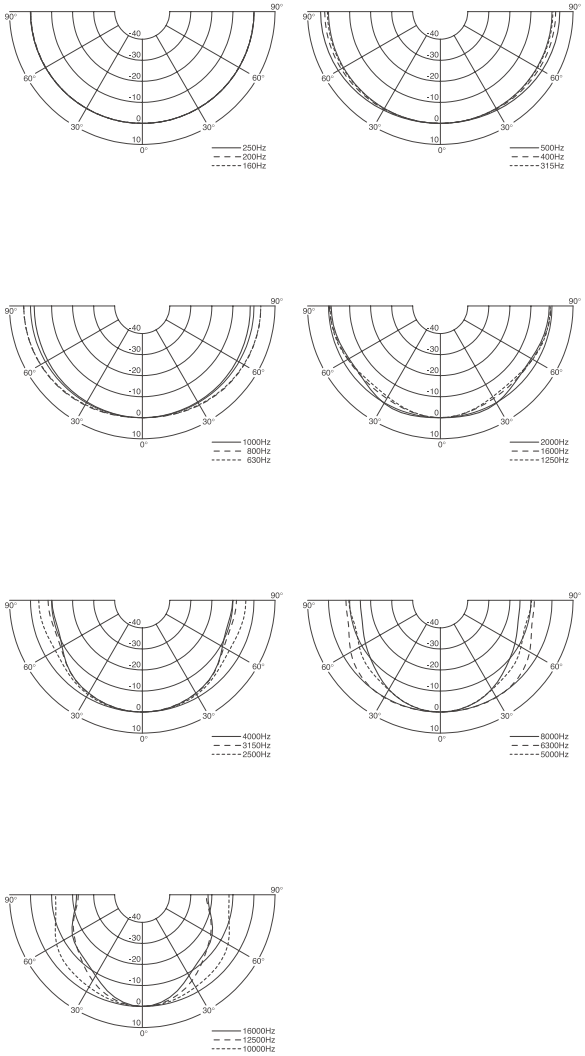
Impedance vs. Frequency



Directivity Factor vs. Frequency



Polar Response



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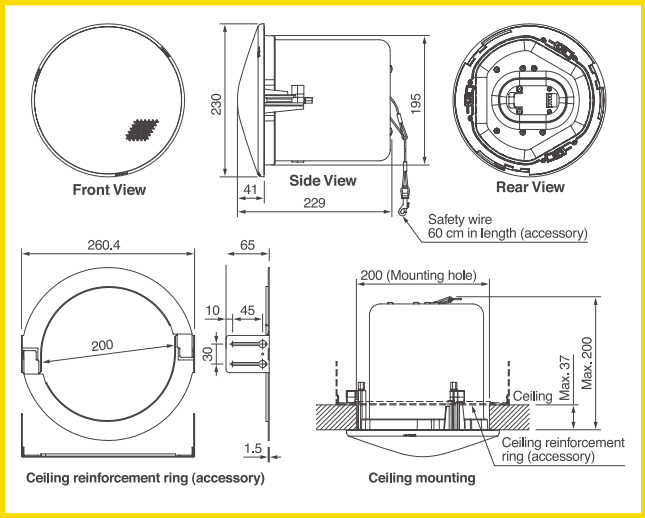
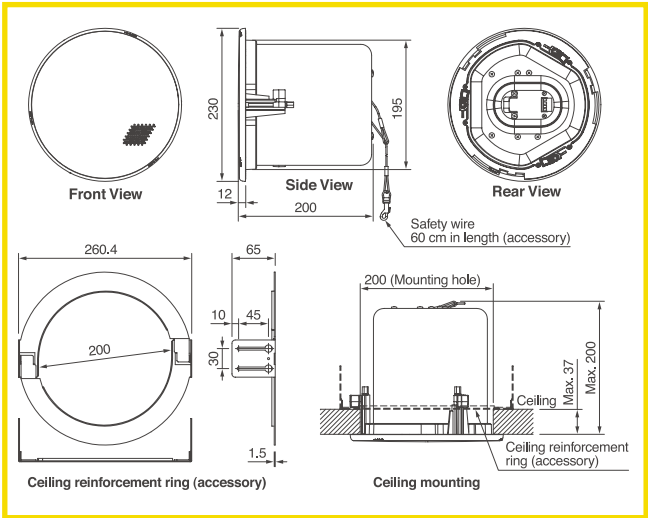
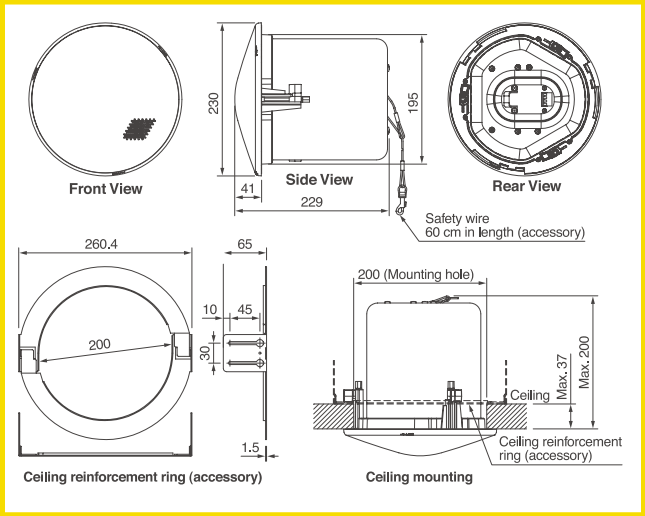
DIMENSIONAL DRAWINGS



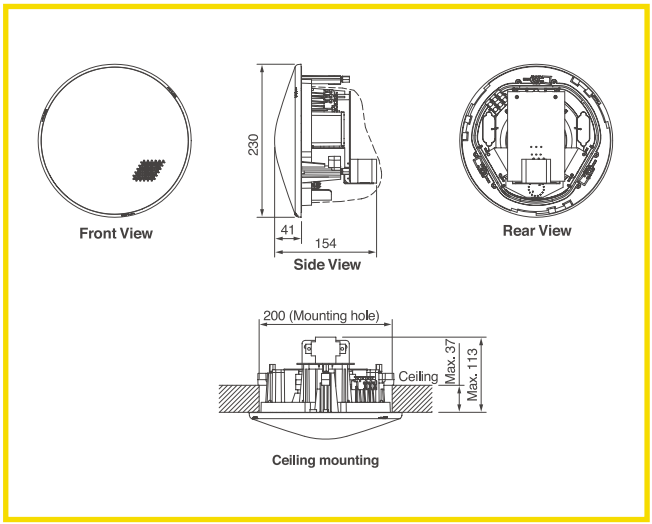
F-122CU (5" FULL-RANGE, 30 W)



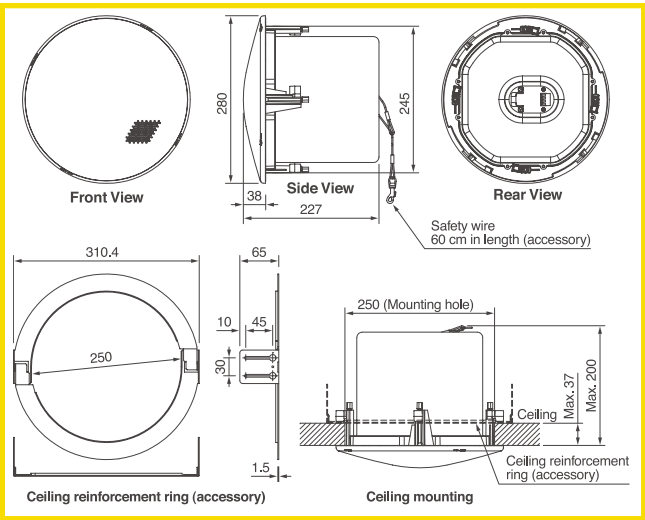
F-2322C (5" FULL-RANGE, 30 W)



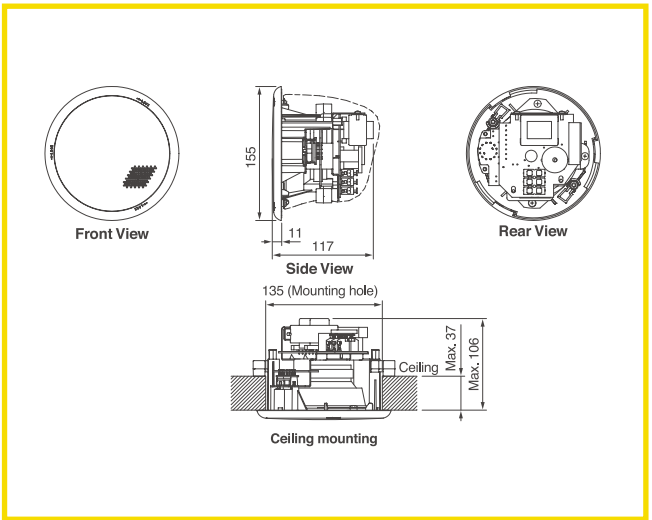
F-2352C (5" CO-AXIAL, 30 W)



F-2352SC (5" CO-AXIAL, 6 W)



F-2852C (6.5" CO-AXIAL, 60 W)



F-1522SC (4" FULL-RANGE, 6 W)

UNIT: mm

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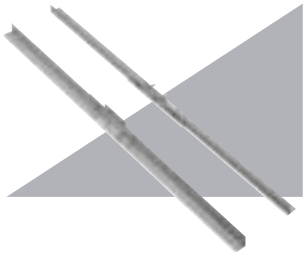
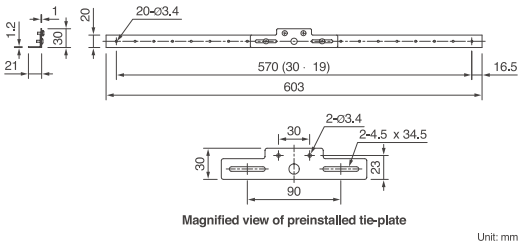
HY-TB1

TILE BRIDGE SUPPORT RAILS

- Required for T-bar ceiling mounting (24")
- Fits models F-122CU, F-2322C, F-2352C, F-2852C, and F-2352SC

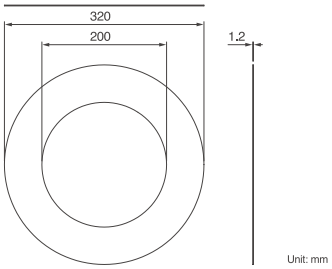




HY-TR1

TRIM RING

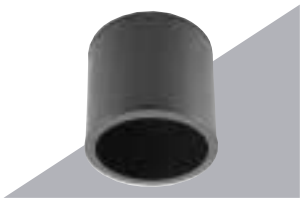
- For covering existing holes (11.8" max.) in retrofit applications
- Fits models F-122CU, F-2322C, F-2352C, and F-2352SC

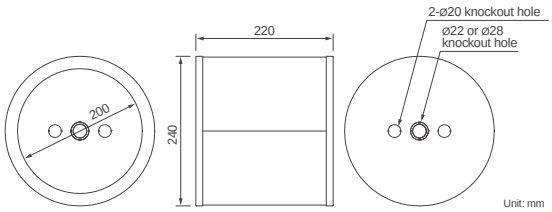


HY-BC1

SURFACE BACK-CAN

- For surface-mount applications in open ceilings
- Low-gloss black paint finish
- Fits models F-122CU, F-2322C, F-2352C and F-2352SC





AC-120

DUAL CHANNEL PROCESSOR FOR F-122CU

E-03R

900 SERIES PROCESSOR MODULE FOR F-122CU

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Fax: 800-733-9766
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Related Products

BG-M SERIES

MODULAR MIXER/AMPLIFIERS

- Compact five channel mixer/amplifiers
- Four models: BG-1015 (15 W), BG-1030 (30 W), BG-1060 (60 W), BG-1120 (120 W)
- 900 Series module slot
- Mic, Tel, Program and Aux inputs
- Music-on-hold output
- 25 V, 70.7 V and 4 ohm speaker outputs
- Optional rack-mount kit
- UL/cUL listed
- Five year warranty

BS-1030

WALL/CEILING-MOUNT BOX SPEAKER

- Indoor and outdoor applications
- Mounting bracket included
- Paintable enclosure
- Two-way, bass-reflex design
- 70.7/100 V transformer (30 W max.) and 8-ohm direct mode
- Screwdriver-adjustable tap settings
- Black (BS-1030B) and White (BS-1030W)
- Five year warranty

FB-100

CORNER-MOUNT SUBWOOFER

- Compact cabinet design fits flush into corners
- Tuned, ported enclosure for deep bass and low distortion
- Acoustic bandpass filter design
- Floor, wall, corner or ceiling-mount
- High power handling (450 W Cont. Program)
- Extended low frequency response
- Heavy-duty loudspeaker component
- Solid, vibration-free construction
- Paintable black finish
- Removable terminal block with loop-through terminations
- Six rigging points for suspended mounting
- Five year warranty

HB-1

IN-WALL SUBWOOFER

- Low frequency enhancement for a wide variety of speaker system applications
- Minimum-depth design allows recessed, flush-mount installation
- Wall and ceiling-mount
- Tuned, ported enclosure
- Acoustic bandpass filter design
- High power handling (240 W Cont. Program)
- Heavy-duty loudspeaker component
- Solid, vibration-free steel enclosure
- Removable terminal block
- Paintable grille
- Mounting bracket included
- Five year warranty

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F SERIES
CEILING SPEAKERS

Model	F-2852C	F-2322C	F-2352C	F-122CU	F-2352SC	F-1522SC
Type	Co-axial	Full-Range	Co-axial	Full-Range	Co-axial	Full-Range
Enclosure	Bass-reflex type				—	
Rated Input (high impedance)	60 W	30 W	30 W	30 W	6 W	6 W
Dispersion (1 to 4k Hz avg.)	120 degrees	170 degrees	170 degrees	180 degrees (hemispherical)	155 degrees	160 degrees
Power Handling Capacity						
Continuous Pink Noise:	90 W (8 ohms) 60 W (16 ohms)		60 W (8 ohms) 30 W (16 ohms)		9 W (8 ohms) 6 W (16 ohms)	
Continuous Program:	180 W (8 ohms) 120 W (16 ohms)		120 W (8 ohms) 60 W (16 ohms)		18 W (8 ohms) 12 W (16 ohms)	
Impedance 70.7 V:	60 W (83 ohms) 30 W (170 ohms) 15 W (330 ohms) 7.5 W (670 ohms) 1.5 W (3.3k ohms)		30 W (170 ohms) 15 W (330 ohms) 5 W (1k ohms) 1.5 W (3.3k ohms) 0.5 W (10k ohms)		6 W (830 ohms) 3 W (1.7k ohms) 1.5 W (3.3k ohms) 0.5 W (10k ohms) 0.25 W (20k ohms)	6 W (830 ohms) 3 W (1.7k ohms) 1.5 W (3.3k ohms)
25 V:	7.5 W (83 ohms) 3.7 W (170 ohms) 1.9 W (330 ohms) 0.9 W (670 ohms) 0.2 W (3.3k ohms)		3.7 W (170 ohms) 1.9 W (330 ohms) 0.6 W (1k ohms) 0.2 W (3.3k ohms) 0.06 W (10k ohms)		0.75 W (830 ohms) 0.4 W (1.7k ohms) 0.2 W (3.3k ohms) 0.06 W (10k ohms) 0.03 W (20k ohms)	0.75 W (830 ohms) 0.4 W (1.7k ohms) 0.2 W (3.3k ohms)
100 V:	60 W (170 ohms) 30 W (330 ohms) 15 W (670 ohms) 3 W (3.3k ohms)	30 W (330 ohms) 10 W (1k ohms) 3 W (3.3k ohms) 1 W (10k ohms)		—	6 W (1.7k ohms) 3 W (3.3k ohms) 1 W (10k ohms) 0.5 W (20k ohms)	6 W (1.7k ohms) 3 W (3.3k ohms)
Low Impedance (adjustable)	8 and 16 ohm direct mode (transformer bypass)					
Sensitivity (1 W, 1 m)	91 dB SPL	90 dB SPL	90 dB SPL	90 dB SPL	89 dB SPL	88 dB SPL
Frequency Response (1/2 space)	60 - 20k Hz (-10 dB) 45 - 20k Hz (-20 dB)		70 - 20k Hz (-10 dB) 50 - 20k Hz (-20 dB)		80 - 20k Hz (-10 dB) 50 - 20k Hz (-20 dB)	65 - 18k Hz (-10 dB) 45 - 20k Hz (-20 dB)
Speaker Component						
High Frequency	Dome-type	4.72" (12 cm) cone-type	Balanced dome-type	4.72" (12 cm) cone-type	Balanced dome-type	3.94" (10 cm) cone-type
Low Frequency	6.3" (16 cm) cone-type		4.72" (12 cm) cone-type		4.72" (12 cm) cone-type	
Mounting Hole (maximum ceiling thickness 1.46" / 37 mm)	9.84" (250 mm)	7.87" (200 mm)				5.31" (135 mm)
Input Terminal	Removable locking connector (Phoenix-type) with screw-down terminals (2 input terminals and 2 bridge terminals)				Push-in connector (Bridging terminal-2 branch type)	
Usable Cable	Stranded / solid copper wire: AWG No. 24 - 14				Solid copper wire: AWG No. 20 - 15 Stranded copper wire: AWG No. 18 - 17	
Enclosure	Steel plate, plating				—	
Baffle	Fire-resistant ABS resin (resin material grade; UL-94 V-0 or equivalent), black					
Rim	Fire-resistant ABS resin (resin material grade; UL-94 V-0 or equivalent), white, paint					
Punched Net	Steel plate, white, paint					
Dust-proof Bag	—				Artificial fiber, black	
Dimensions (grille diameter x depth)	11.02" x 8.94" (280 x 227 mm)	9.06" x 7.87" (230 x 200 mm)	9.06" x 9.02" (230 x 229 mm)	9.06" x 9.02" (230 x 229 mm)	9.06" x 6.06" (230 x 154 mm)	6.10" x 4.61" (155 x 117 mm)
Weight (including mounting accessories)	11.24 lbs (5.1 kg)	8.16 lbs (3.7 kg)	8.16 lbs (3.7 kg)	8.16 lbs (3.7 kg)	3.31 lbs (1.5 kg)	2.2 lbs (1 kg)
Accessories	Grille/Panel, Ceiling Reinforcement Ring, Safety Wire, Cutout Paper Pattern				Grille/Panel, Cutout Paper Pattern	
Options						
Surface-Mount Back Can	—	HY-BC1	HY-BC1	HY-BC1	HY-BC1	—
Tile Bar Bridge	HY-TB1	HY-TB1	HY-TB1	HY-TB1	HY-TB1	—
Trim Ring	—	HY-TR1	HY-TR1	HY-TR1	HY-TR1	—
Ceiling Reinforcement Ring	—	—	—	—	HY-RR2	HY-RR1
Electronic Controller	—	—	—	AC-120 or E-03R	—	—

Literature Order #: L-F-CEILING
Specifications subject to change without notice.
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