

VERTEC® Series

Application:

The VT4887A Three-Way Line Array Element is designed to deliver high-quality reinforcement of music and speech in a variety of applications including concert audio and corporate A/V presentations of all types for both portable users and fixed venue installations.

Key Features:

- ▶ Advanced technology components: Differential Drive®, neodymium magnet, dual voice coil, Direct Cooled™ cone transducers for low weight and high output.
- ▶ New 2168J-1 8" low frequency drivers offer improved performance and extended low frequency response
- ▶ Proprietary waveguides couple to create precision HF vertical slot aperture
- ▶ Radiation Boundary Integrator® (RBI): Patented technology integrates output of individual bandpass elements
- ▶ Advanced construction techniques using JBL PlyMax® engineered wood materials provide rigid, lightweight enclosure
- ▶ Rugged DuraFlex™ exterior finish; weatherized components
- ▶ Integrated S.A.F.E.™ suspension system: premium heat-treated alloys provide rigid, reliable hanging arrays
- ▶ Pre-engineered to accept optional amplified electronics package. Rear-panel mechanical attachments and electrical connections ensure upgrade path for DrivePack™ self-powered system modules with integral signal processing
- ▶ For use in stand-alone arrays or in combination with other VERTEC system models

The VT4887A is a rugged, compact and lightweight enclosure housing two 8" woofers, four 4" midrange radiators, and two high frequency compression drivers. VERTEC's advanced components provide an extremely high power-to-weight ratio. Enclosure features foam-backed low frequency grilles, dense protective foam inserts for midrange apertures and fine steel mesh grille to protect high-frequency apertures. Speaker cones are treated with weather-resistant compounds.

VERTEC arrays are rigid for maximum support strength, yet flexible in design and application. The VT4887A's suspension hardware relies on quick-release pins and end-mounted metal tubes to couple adjacent VT4887A's together. Rigging tubes made of hard-black anodized 6061-T6 Aluminum. Hinge bars made from premium-grade chromoly alloy steel, with epoxy powder coating over plated surfaces. Plated hinge pins and stainless steel quick-release pin lanyards to resist corrosion and weather damage. Enclosure ships with integral front and rear hinge bar set. Protective grille cover/wheel board and soft cover ensure handy transport for rough road conditions, (purchased separately as VT4887-ACC).



Specifications:

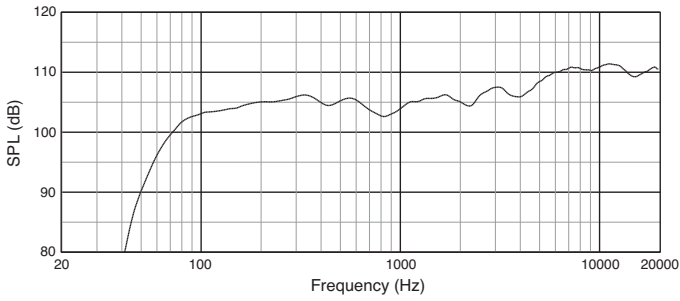
Line Array Element	
Frequency Range (-10 dB):	55 Hz – 22 kHz
Frequency Response (+/- 3 dB):	67 Hz – 20 kHz
Horizontal Coverage Angle (-6 dB):	100 degrees nominal (500 Hz – 16 kHz)
Vertical Coverage Angle (-6 dB):	Varies with array size and configuration
System Input Power Rating:	LF: 1000 W Continuous, 4000 W Peak (AES / 2 hour) MF/HF: 225 W Continuous, 900 W Peak (AES / 2 hour)
Maximum Peak Output ¹ :	131 to 141 dB SPL, 1m (frequency/bandpass dependent)
Recommended Amplification:	LF: 1000 – 2000 W into 8 ohms MF/HF: 450 – 900 W into 8 ohms
Recommended Signal Processing:	dbx® 4800, Crown® I-Tech, BSS FDS-366T, and other Digital System Controllers supported
Transducer Sections	
Low Frequency:	Two 2168J-1, 203 mm (8 in) dia., 76 mm (3 in) Dual Coil, neodymium Differential Drive®, Direct Cooled™
Bandpass Nominal Impedance:	8 ohms (16 ohms each transducer, wired in parallel)
Input Power Rating ² :	1000 W Continuous, 4000 W Peak (AES / 2 hour) 700 W Continuous, 2800 W Peak (100 hour)
Bandpass Sensitivity:	97 dB, 1W / 1m (2.83 Vrms at 3.3 ft)
Mid & High Frequency:	MID: Four 2104H, 101 mm (4 in) with 25.4 mm (1 in) dia. voice coil HIGH: Two 2408H, 25 mm (1 in) exit compression driver, 38 mm (1.5 in) voice coil
Bandpass Nominal Impedance:	8 ohms (drivers wired in series-parallel, passive network)
Input Power Rating ² :	225 W Continuous, 900 W Peak (100 hour)
Bandpass Sensitivity:	103 dB, 1W / 1m (2.83 Vrms at 3.3 ft)
Enclosure	
Box Construction:	Wedge frustum 5 degree side angle enclosure. PlyMax® engineered wood composite structure, DuraFlex™ finish, 2 handles with integrated LF ports
Suspension System:	S.A.F.E. hardware, integral hinge bars nest in rigging tubes on box ends. Quick release pins with restraining lanyards. Set of 4 hinge bars included. Suspend with VT4887-AF or VT4887-SF Array Frame.
Grille:	Black perforated steel, foam backed
Input Connectors:	Neutrik® Speakon® NL-8 and NL-4 (2x each), Pin 3+/- for Lows & Pin 4+/- for Mid-Highs
Dimensions (W x H x D):	787 mm x 281 mm x 415 mm (31 in x 11 in x 16.3 in)
Net Weight:	30.4 kg (67 lb)
Shipping Weight:	40.8 kg (90 lb)

¹Calculated maximum SPL based on rated peak power and measured sensitivity

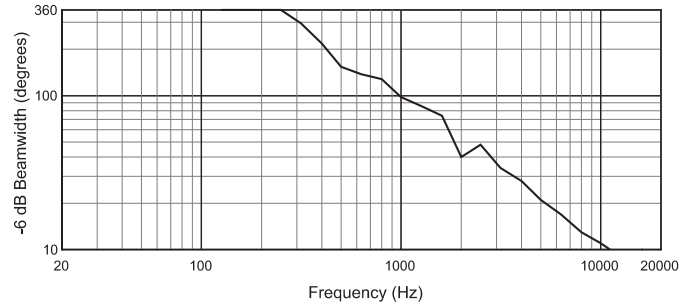
²AES Standard, one decade pink noise with 6 dB crest factor within device's operational band, free air. Standard AES 2 hr rating plus long term 100 hr rating are specified for cone transducers

JBL continually engages in research related to product improvement. Some materials, production methods and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.

▶ VT4887A Compact Bi-Amplified Three-Way High Directivity Line Array Element



Frequency Response, On-Axis, Single Line Array Element



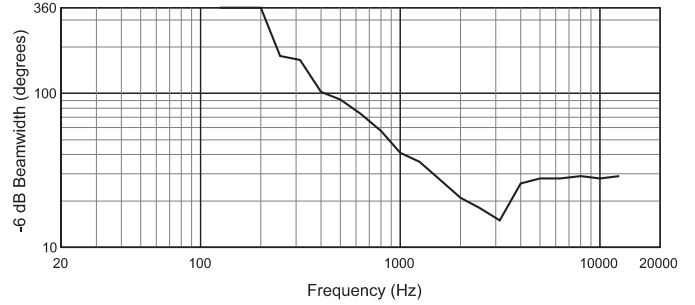
Vertical Beamwidth, Single Line Array Element

VT4887A Acoustical Measurements

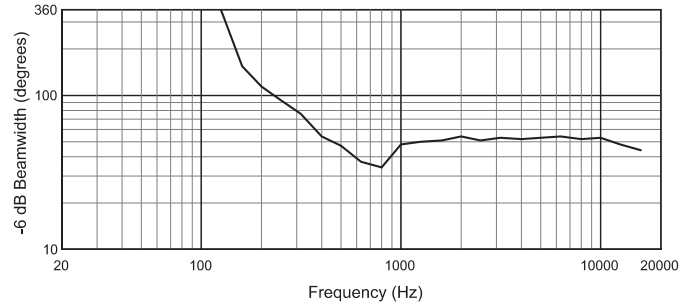
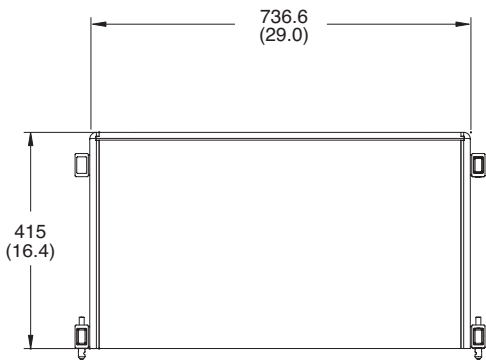
The frequency response measurement shows composite response. The Vertical Beamwidth results range from a single box up to an 8-box array with 10° splay angles between adjacent array elements.

All measurements provided herewith are derived from data gathered with a calibrated measurement microphone centered on-axis of the box or array, with polar data points taken symmetrically around the measurement axis.

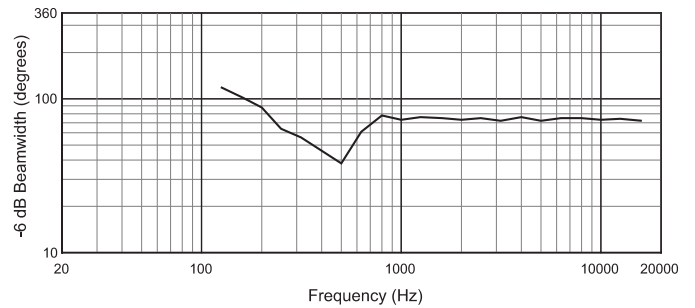
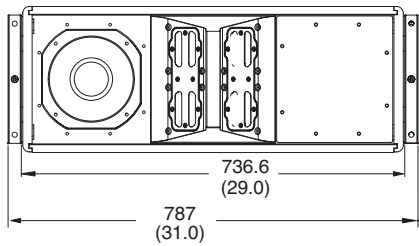
All polars were taken as groundplane measurements at a distance of 10 meters, with data gathered on 5-degree intervals from 0-355° using the MLSSA measurement system.



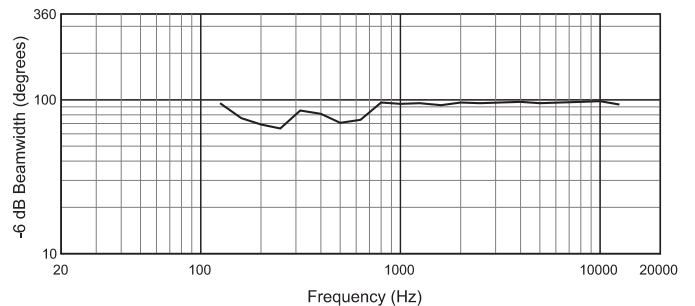
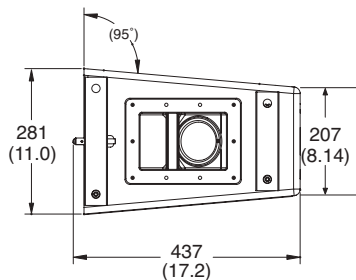
Vertical Beamwidth, Two Element Array (10° splay between cabinets)



Vertical Beamwidth, Four Element Array (10° splay between cabinets)



Vertical Beamwidth, Six Element Array (10° splay between cabinets)

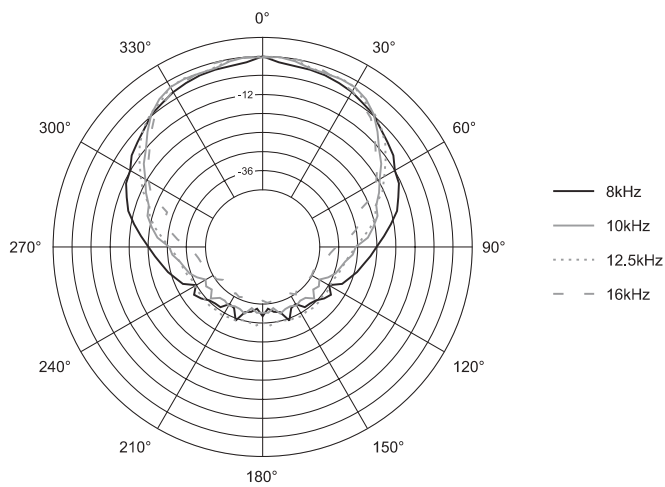
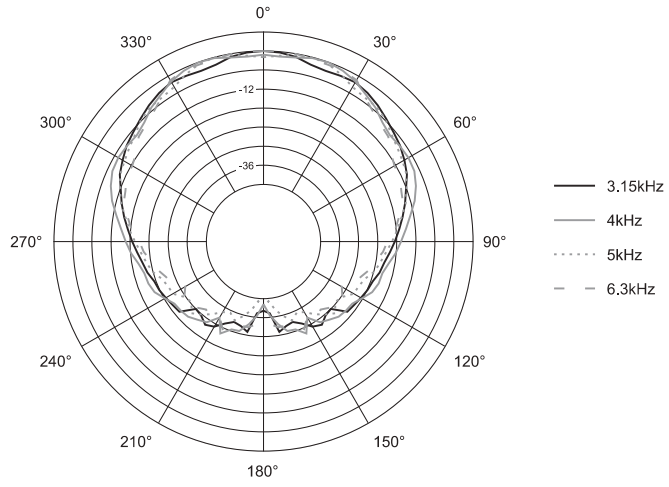
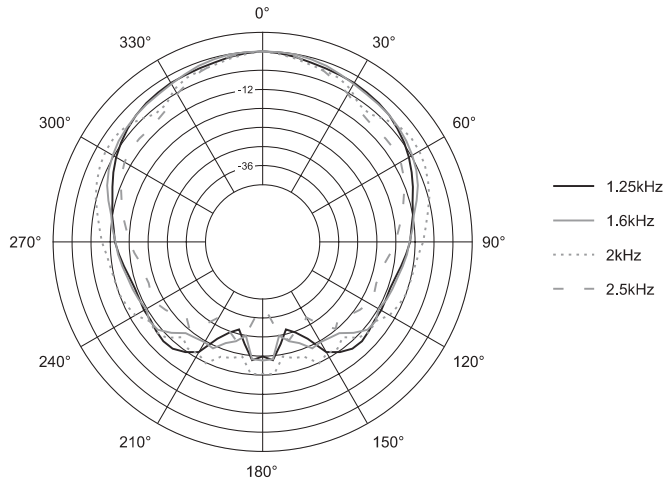
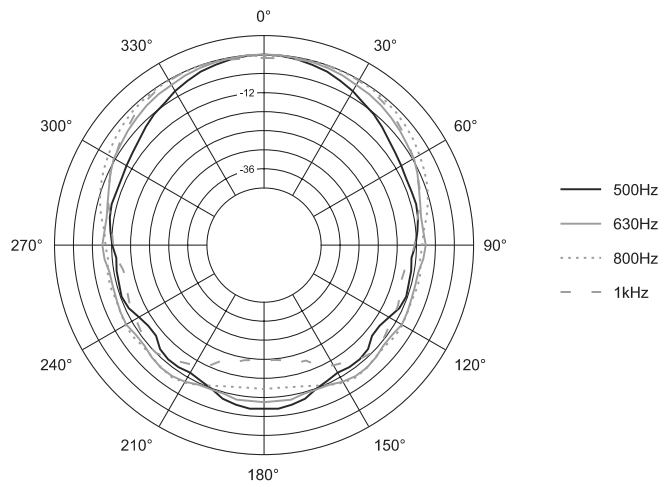
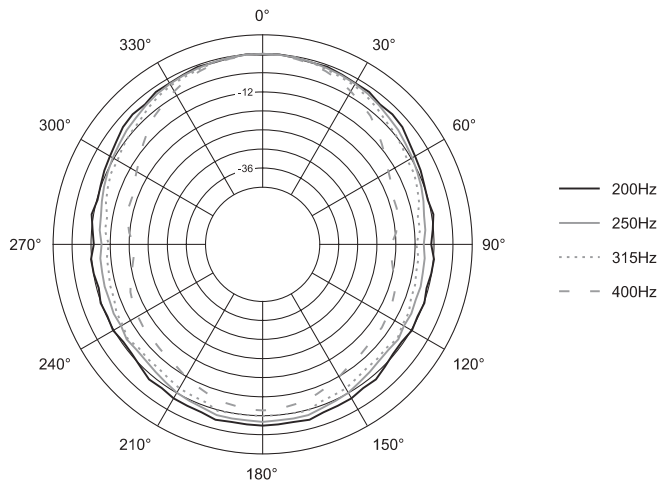


Vertical Beamwidth, Eight Element Array (10° splay between cabinets)

Dimensions in mm (in.)

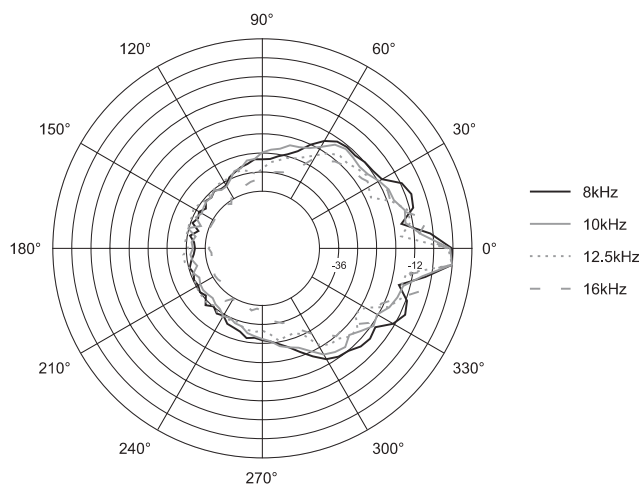
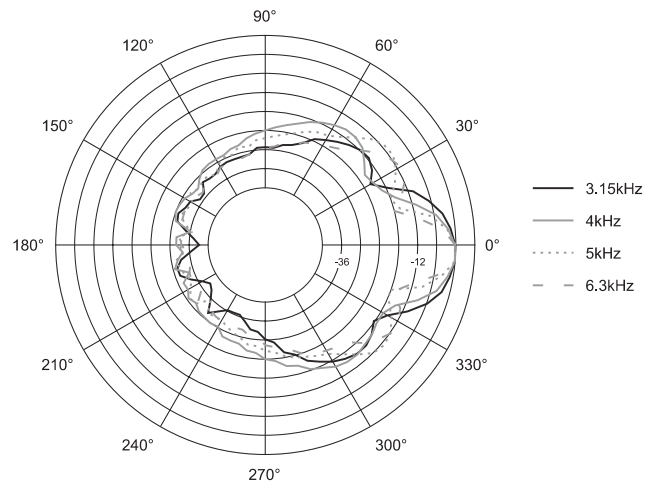
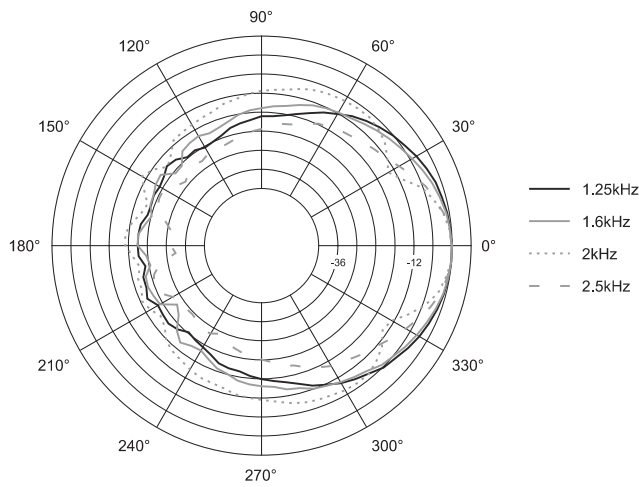
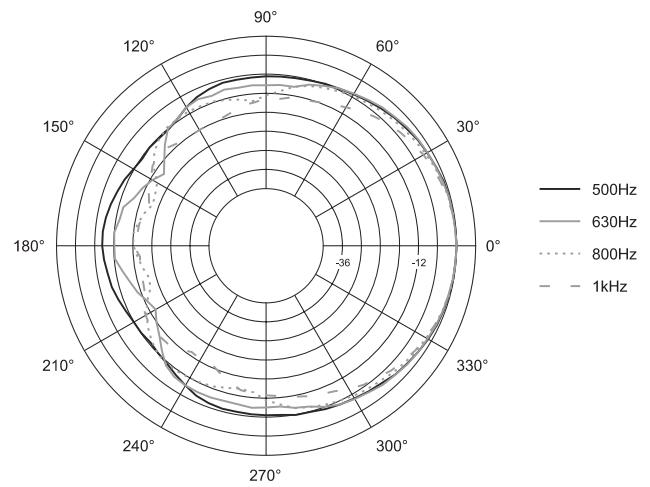
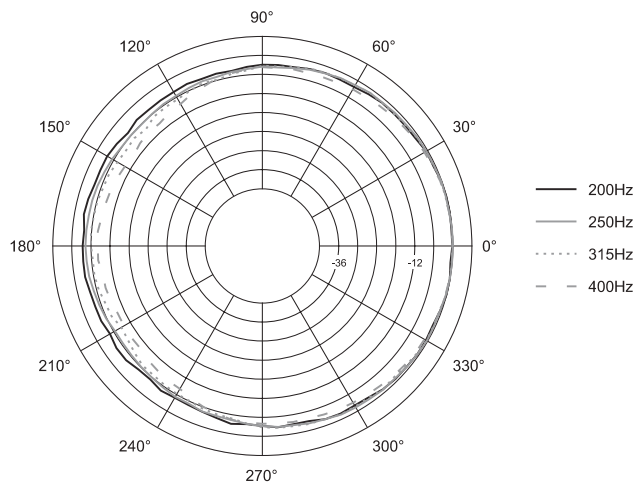
System Dimensions (WxHxD):

787 mm x 281 mm x 415 mm including attached suspension hardware



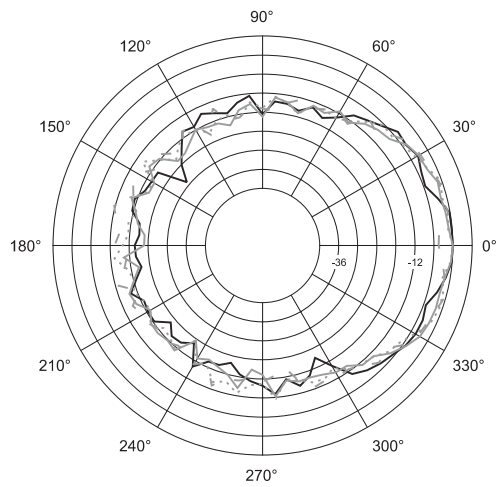
**Horizontal 1/3 Octave Polars
(Single VT4887A Array Element)**
Data taken as groundplane measurements at a distance of 10 meters, gathered on 5-degree intervals from 0-355° using the MLSSA measurement system.

▶ VT4887A Compact Bi-Amplified Three-Way High Directivity Line Array Element

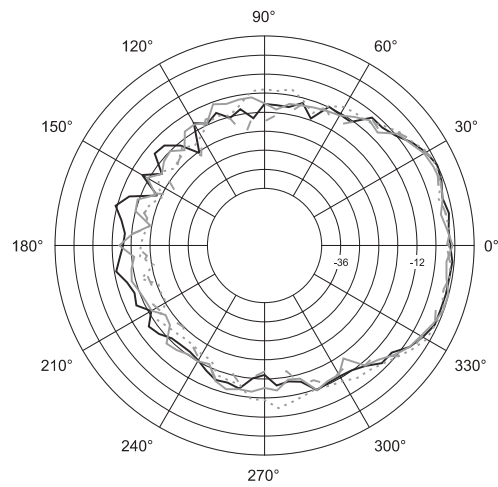


Vertical 1/3 Octave Polars (Single VT4887A Array Element)

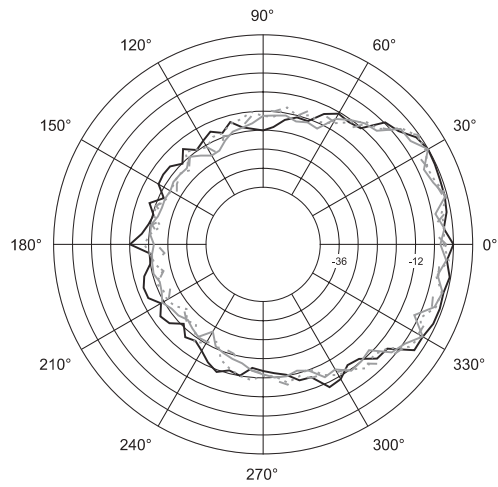
Data taken as groundplane measurements at a distance of 10 meters, gathered on 5-degree intervals from 0-355° using the MLSSA measurement system.



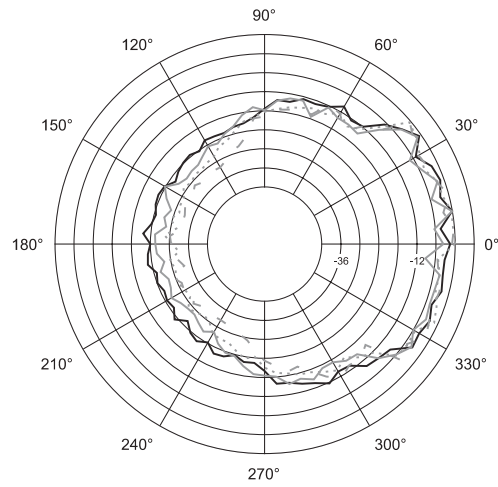
- 200Hz
- 250Hz
- ... 315Hz
- - 400Hz



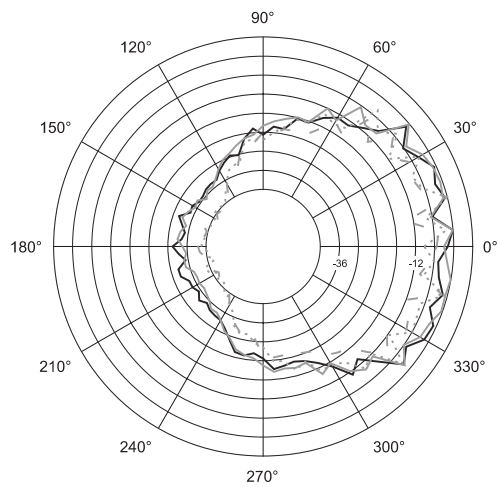
- 500Hz
- 630Hz
- ... 800Hz
- - 1kHz



- 1.25kHz
- 1.6kHz
- ... 2kHz
- - 2.5kHz



- 3.15kHz
- 4kHz
- ... 5kHz
- - 6.3kHz



- 8kHz
- 10kHz
- ... 12.5kHz
- - 16kHz

Vertical 1/3 Octave Polars (8-Box Array of VT4887A Array Elements)

Data taken as groundplane measurements at a distance of 10 meters, gathered on 5-degree intervals from 0-355° using the MLSSA measurement system.

▶ VT4887A Compact Bi-Amplified Three-Way High Directivity Line Array Element

VERTEC System Arrays

The VT4887A is an articulating line array element designed for use in vertically oriented, multi-box arrays. A nominal horizontal coverage pattern of 100° is maintained, while setting the individual box angles allows the creation of arrays with varying vertical coverage angles. Vertical coverage of an array is a function of the number of boxes used and the splay angles chosen.

VT4887A enclosures can be suspended from available VT4887-AF or VT4887-SF array frames. Due to the use of JBL's S.A.F.E. suspension hardware system, rigid arrays can be constructed that can be tilted either upwards or downwards at radical angles. Front hinge bars are tightly coupled, while rear hinge bars are used to set angles from zero to ten degrees for adjacent enclosures.

VT4887-AF (Array Frame)

This array suspension frame is crafted of 6061 heat-treated aluminum. It includes 11 (eleven) attachment holes for shackles, each fitted with bronze bushings for long life. These holes are set on approx. 4" centers. Each hole has an I.D. (inner diameter) of 25.4 mm (1 in). Array frames are fitted with SAE Grade 8 bolts, 7075 Grade aluminum receiver blocks and steel quick release pins with stainless steel restraining lanyards. The VT4887-AF can be used to groundstack up to 8 enclosures. Weight: 36 kg (80 lb).

VT4887-SF (Short Frame)

This array suspension frame is crafted in similar fashion to the VT4887-AF. The VT4887-SF is primarily intended for use with smaller clusters in tight spaces or distributed satellite arrays. Optional anchor for use on bottom of large arrays. Can also be used to groundstack up to 6 enclosures. Weight: 18 kg (40 lb).

VT4887-ACC

The VT4887-ACC includes items necessary for the proper transport and protection of the VT4887A. This accessory kit includes: (1) VT4887-DOLLY & (1) VT4887-COVER.

Important Note: The VT4887-ACC is sold as a separate item. One kit should be ordered with each VT4887A to ensure safe and reliable transport of each system in portable use.



4-element array, VT4887A, suspended application with VT4887-AF array frame



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