

The goal of every Motus driver design is linear frequency response, low distortion and superb tonality.

After hundreds of hours of refinement each driver allows for the application of a minimal crossover to achieve your desired target response.

Every Motus driver goes through a rigorous four stage quality control process to ensure that the driver in your loudspeaker represents the best Motus has to offer.

The UH165PW1 is a state of the art underhung mid bass driver. It is equally at home as the woofer in a two way design or the midrange in a multi-way speaker.

- Underhung voice coil
- Precision machined undercut pole piece
- Linear frequency response
- Aerodynamic basket design
- Ultra low distortion
- Acoustically transparent spider
- FEA Optimized motor
- Vented voice coil
- Pressed paper cone
- Symmetrical lead wire placement
- Vented pole piece
- Gold plated terminals
- Dual shorting rings
- Die cast aluminum basket



### UH165PW1 - Parameters

#### Thiele / Small Parameters

Resonance Frequency	FS	33.83Hz
Mechanical Q	QMS	7.95
Electrical Q	QES	.38
Total Q Factor	QTS	.37
Force Factor	BL	7.19 Tm
Moving Mass	MMS	16.99 grams
Suspension Compliance	CMS	1302 mm/N
Radiating Diameter	Dia.	134.00 mm
Radiating Area	SD	143.03 sq. cm
Equivalent Volume	VAS	36.80 liters
Sensitivity (1W / 1M)	SPL	87.44 dB
Sensitivity (2.83V / 1M)	SPL	89.07 dB

#### Electrical Parameters

DC Resistance	DCR	5.50 ohms
Nominal Impedance	NOM	6.00 ohms
Voice Coil Inductance	LE	.36 mH

#### Power Handling

Long Term Power Handling*	90 watts
Short Term Power Handling*	150 watts

#### Enclosure Volume\*\*

Sealed - Q.707	13.51 L (.48 cu ft)	65.30 Hz -3dB
Vented - QB3	25.29 L (.89 cu ft)	38.78 Hz -3dB

#### Magnet and Voice Coil

Voice Coil Diameter	44.20 mm
Voice Coil Winding Height	8.00 mm
Voice Coil Layers	4
Gap Height	18.00 mm
Linear Excursion	± 5.00 mm
Max Mechanical Excursion	± 15.20 mm

#### Dimensions and Weight

Total Unit Weight	2.40 kg
Total Outside Diameter	182.00 mm
Total Depth	104.50 mm

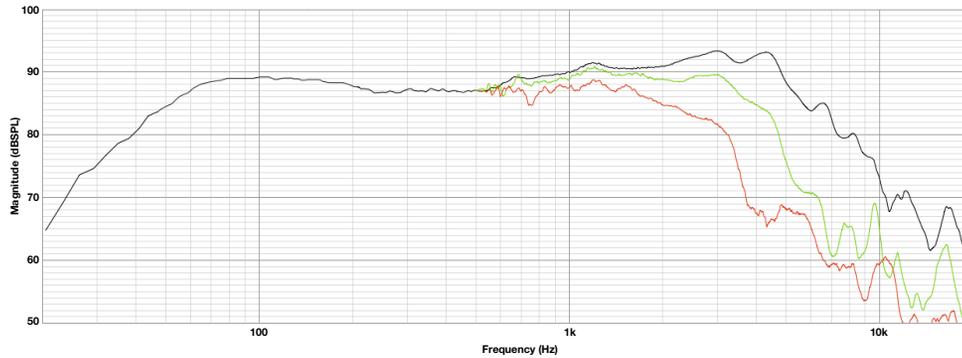
\*IEC 268-5

\*\*Estimated volume, no added resistance

Thiele / Small parameters measured after 24 hours break in

All specifications are subject to change without notice

## Frequency Response (1/12 Octave Smoothing)



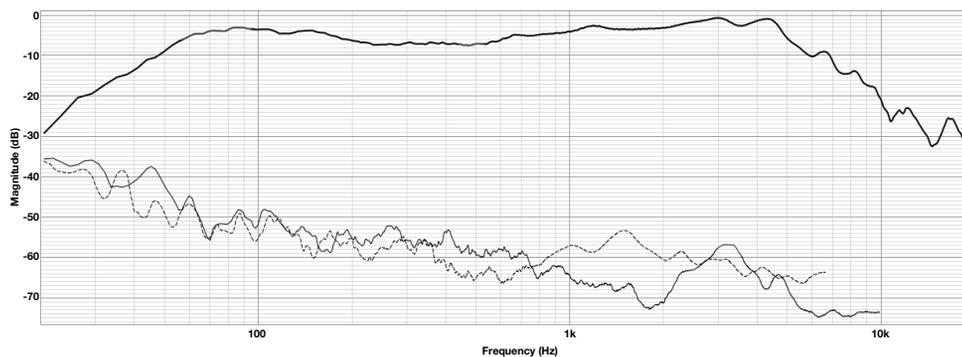
### Curve Description

Black Curve      On Axis SPL  
Green Curve      30 deg off axis  
Blue Curve        60 deg off axis

### Test Conditions

Level              2.83 volts  
Mic Distance      1 meter  
Smoothing        1/12 Octave  
Boundary         IEC Baffle

## Harmonic Distortion (1/12 Octave Smoothing)



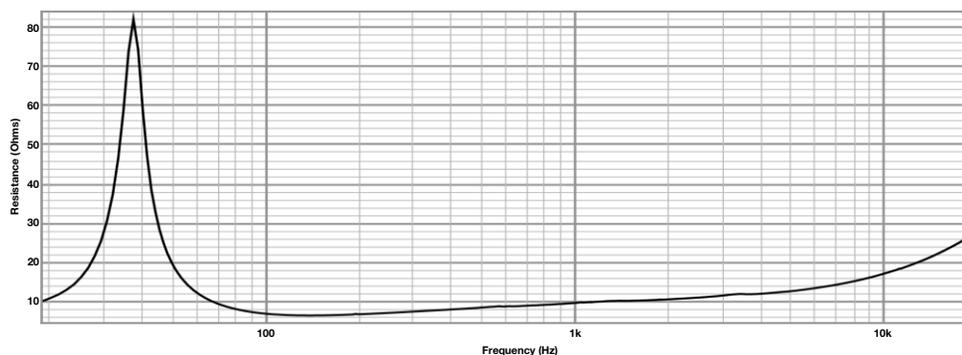
### Curve Description

Black Curve      On Axis  
Solid Curve       2<sup>nd</sup> Harmonic  
Dash Curve       3<sup>rd</sup> Harmonic

### Test Conditions

Level              2.83 volts  
Mic Distance      1 meter  
Smoothing        1/12 Octave  
Boundary         IEC Baffle

## Impedance



### Curve Description

Black Curve      Impedance

### Test Conditions

Boundary         Free Air