

MODEL: AC470Y-B5s-8

18" BASS DRIVER-2000W

Description

The AC470Y-B5s is an Australian made professional low frequency 18" bass loudspeaker with a useful upper limit of 2.8KHz. This model has been designed for peak linear travel of 9.5mm and capable of 21mm before damage, therefore capable of producing extreme levels.

This model features rigid die cast aluminum frame, CNC precision components. The ferrite magnet-assembly has been optimized for BL symmetry. An aluminum shorting ring reduces flux modulation, improves inductance linearity thereby delivering low distortion and improves stability. Less wind noise is achieved with an undercut and flared vented pole piece. The machined components are finished in e-coat for superior corrosion resistance.

High thermal rating is achieved with a 4" voice coil, through magnet cooling, under spider venting and state of art high temperature adhesives. The solid die-cast aluminum chassis also acts as a heat-sink conducting heat away from the magnet structure.

The stiff ribbed paper cone is a product of our OFP technology and is molded in-house from a blend of premium air dried wood pulp and Kevlar fibres resulting in smooth controlled mid response. Our own Aramid spider was chosen for its high rigidity and long term stability, the shape optimized for suspension symmetry. The accordion cloth surround also made in house delivers extreme excursion with minimal distortion.

Efficient driver parameters have been selected to produce a full rich punchy bass in vented, band-pass and horn loaded enclosures.

The AC470Y model employs CNC machined magnet components and hand crafted to the highest and strictest tolerances to meet the demanding requirements of professional sound reinforcement applications.



Options

Model	Impedance
AC470Y-B5s-4	4 ohm
AC470Y-B5s-8	8 ohm
AC470Y-B5s-16	16 ohm

This datasheet applies to our AC470Y-B5s-8 model.

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Technical Data

Typical measured Thiele/Small parameters:

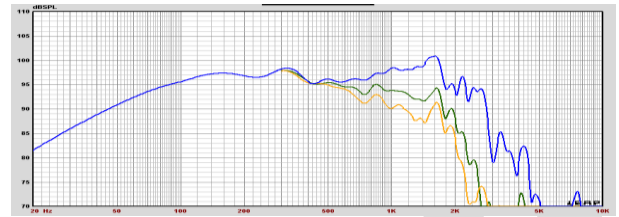
Maximum program power	=	2000 watt
AES power rating	=	1000 watt rms
Rated nominal impedance	Z	= 8 ohms
Rated frequency range	=	30 – 2800 Hz
Reference sensitivity	=	97.5 dB SPL
Resonance frequency	=	39.5 Hz
Mechanical Q	Q _m	= 5.2
Electrical Q	Q _e	= 0.316
Total spk. Q	Q _{ts}	= 0.298
Diaphragm mass	M _{md}	= 163 gms
Effective diaphragm diameter	D	= 39.3 cm
Vol. equiv to spk compliance	V _{as}	= 183 litres
Mechanical compliance	C _{ms}	= 0.086 mm/N
BL product	Bl	= 28.0 T.m.
Voicecoil diameter	d	= 100 mm
Voicecoil material	=	copper
Voicecoil DC resistance	R _e	= 5.3 ohms
Voicecoil inductance @1Kz	L _{vc}	= 2.2 mH
Voicecoil height	=	27.0 mm
Height of air-gap	H _g	= 12 mm
Peak linear displacement	X _{pk}	= 9.5 mm
X Damage peak to peak	X _{pk-pk}	= 42 mm
Reference efficiency	=	3.6 %
Speaker total mass	=	12.8 Kg

Specifications subject to change without notice.

Notes

- (1) AES power is determined according to AES2-1984 standard in free-air 60Hz-600Hz rel. to Z_{min}.
- (2) Maximum recommended program power is twice AES power providing the safe excursion limits are not exceeded.
- (3) Reference sensitivity is SPL at 1W at 1m derived from Thiele/Small parameters.
- (4) Frequency range is the useful frequency range for this transducer when mounted in its recommended enclosure.
- (5) Thiele/Small parameters are derived after the test speaker has been preconditioned and are a better representation of the long term parameters in use.
- (6) Peak linear displacement X_{pk} derived from Klippel XBL measurement at 82%.

Frequency Response



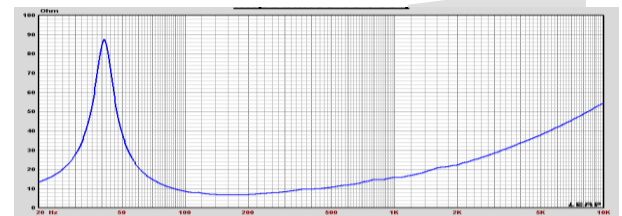
Infinite baffle sound pressure response recorded at 2.83V or nominal one watt at one meter.

Blue curve is on axis spl response

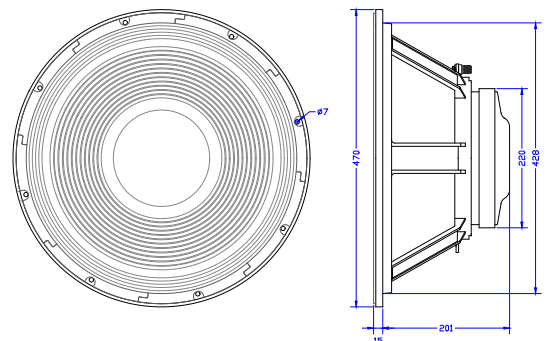
Green curve SPL response 30° off axis.

Orange curve SPL response 40° off axis

Impedance plot



Free-air impedance magnitude plot.



Mounting Details

- Baffle opening diameter
 - front mounting 430 mm
 - rear mounting 430 mm
- Mounting pattern:
 - Eight 7.0 mm holes equi-spaced on a 444mm PCD.
- Flange thickness 15 mm.