

Description

The AC470Y/B6s is an Australian made professional low frequency 18" bass loudspeaker with a useful upper limit of 2.0 kHz. This model has been designed for peak linear travel of 11.0mm and capable of 21mm peak to peak before damage, therefore capable of producing extreme levels.

This model features rigid die-cast aluminium frame, CNC precision components.

High thermal rating and reliability is achieved with a 4" inside/outside copper coil on fiberglass bobbin, high temperature materials and forced through magnet ventilation.. The die-cast aluminium frame also acts as a heat-sink conducting heat away from the magnet structure.

The ferrite magnet-assembly has been optimized for BL symmetry. An aluminium shorting ring reduces flux modulation, improves inductance linearity, lowering distortion and improving stability. The aluminium shorting ring also acts as a heat sink for the voice-coil. 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.

The stiff curvilinear paper cone is a product of our OFP technology and is moulded in-house from a blend of premium air dried wood pulp and Kevlar fibres resulting in smooth controlled mid response. The dual Aramid spiders are made in house, chosen for their linearity and long term stability. Only two optimized spiders delivered the required suspension stiffness, linearity and symmetry. The accordion cloth surround also made in house delivers extreme excursion with minimal distortion.

The high BL factor and efficient driver parameters are a requirement to deliver 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-B6s-4	4 ohm
AC470Y-B6s-8	8 ohm
AC470Y-B6s-16	16 ohm

This datasheet applies to our AC470YT-B6s-8 model.

Technical Data

Typical measured Thiele/Small parameters:

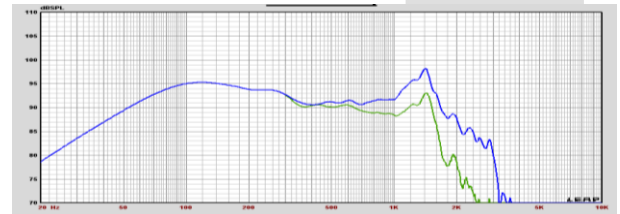
Maximum program power	= 2000 W
AES power rating	= 1000 W
#Rated nominal impedance Z	= 8 ohms
Rated frequency range	= 30 – 2000 Hz
Reference sensitivity SPLo	= 97.6 dB SPL
Resonance frequency	= 47 Hz
Mechanical Q Qm	= 11.2
Electrical Q Qe	= 0.355
Total spk. Q Qts	= 0.345
Diaphragm mass Mmd	= 220 gms
Effective diaphragm diameter D	= 39.3 cm
Effective diaphragm area Sd	= 1225 sq.cm
Vol. equiv to spk compliance Vas	= 98.7 litres
Mechanical compliance Cms	= 0.047 mm/N
BL product Bl	= 35.1 T.m.
Voicecoil diameter d	= 100 mm
Voicecoil material	= copper
Voicecoil DC resistance Re	= 6.1 ohms
Voicecoil inductance @1Kz Lvc	= 2.2 mH
Voicecoil height	= 30.0 mm
Height of air-gap Hg	= 16 mm
Peak linear displacement Xpk	= 11.0 mm
X Damage peak to peak Xpk-pk	= 42 mm
Reference efficiency	= 3.0 %
Speaker total mass	= 14.0 kgm

Also available in 4 or 16 ohm impedance.
 Specifications subject to change without notice.

Notes

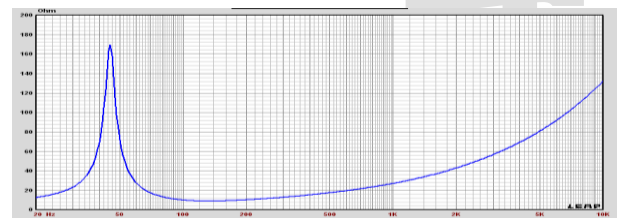
- (1) AES power is determined according to AES2-1984 standard in free-air. Power calculated on minimum impedance.
- (2) Maximum recommended program power is twice AES power providing the safe excursion limits are not exceeded.
- (3) Reference sensitivity is SPL at 1W at 1m derived from Thiele/Small parameters.
- (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 Xpk derived from Klippel XBL at 82%.

Frequency Response

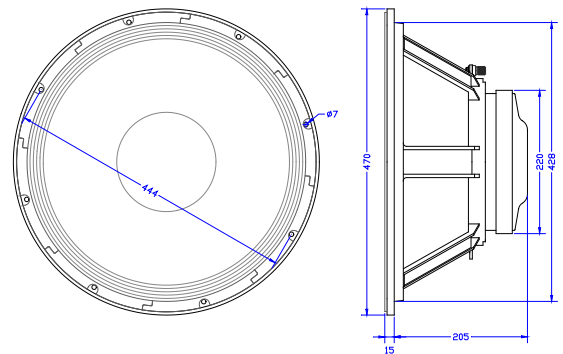


Infinite baffle sound pressure response recorded at 2.83V or nominal one watt at one meter.
 Blue curve is on axis spl response
 Green curve SPL response 30° off axis.

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.