

MODEL: AC257P-B22A-16**10" BASS-MID****300W**

Description

The AC257P-B22A is an Australian made economical ferrite bass-mid 10" loudspeaker with a useful upper limit of 4.6 kHz. This model has the largest linear excursion Xpk >6mm in the AC257P range, medium efficiency, and very smooth frequency response and clear pleasant reproduction quality suitable for wide range of applications. Best choice for demanding bass applications.

The latest technology applicable to high power loudspeakers construction has been incorporated without compromise.

The air dried cone is made in house from local and imported paper fibres with Kevlar reinforcing fibres for maximum stiffness and damping. High efficiency wide frequency range and good cone rigidity is achieved with a deep curvilinear paper cone. The speaker resonance was chosen to offer high power handling, high sensitivity and reliable performance in bass applications. The cone body is terminated with a treated accordion cloth surround and finished with a paper dust-cap to enhance bass performance and control mid and high frequency response.

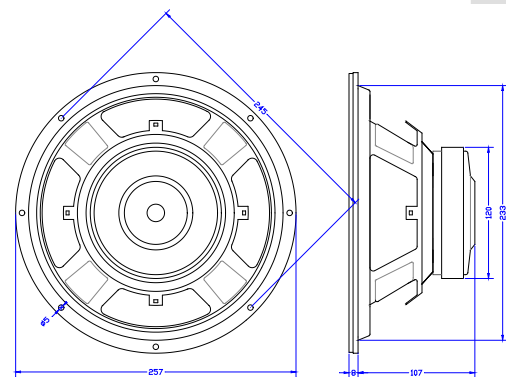
Reliable performance and 150Wrms AES rating is achieved with a 45mm voice coil and state of art high temperature adhesives.

The AC257P model is engineered and hand crafted to the highest and strictest tolerances to meet the demanding requirements of professional sound reinforcement systems.

Application

High-quality bass sound reinforcement applications in the frequency range 40Hz to 4.6kHz for applications where economy light weight and big performance in a small enclosure is an important consideration i.e. combo applications, electric bass, live music clubs, music playback systems, fold-back and other general applications. In the correct enclosure and under controlled conditions we recommend each AC257P-B22A be driven by a power amplifier capable of delivering 50 to 300 watts into 8 ohms providing the average rms program power does not exceed 150W and the incoming signal processed to avoid over excursion at low frequencies.

Refer: -C257P-B22A-8 application notes for enclosure details



Mounting Details

Baffle opening diameter:

front mounting 233 mm

Mounting pattern:

Eight 5.0 mm holes eqi-spaced on a 245mm P.C.D.

Flange thickness 8.3mm

Technical Data

Typical measured Thiele/Small parameters

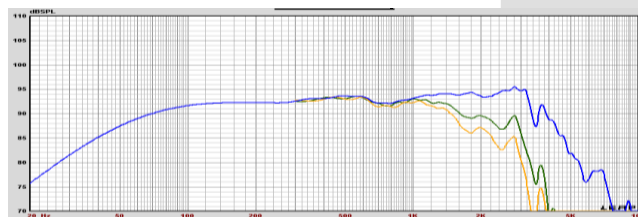
Maximum program power		300 watt
AES power rating		150 watt
Rated nominal impedance	Z	16 ohms
Rated frequency range		40 – 4.6kHz
Reference sensitivity		93.0 dB SPL
Resonance frequency		52 Hz
Mechanical Q	Qm	3.7
Electrical Q	Qe	0.60
Total spk. Q	Qts	0.52
Diaphragm mass	Mmd	29.6 gms
Effective diaphragm diameter		21.6 cm
Effective diaphragm area	Sd	0.0366 sq.m.
Vol. equiv to spk compliance	Vas	51.2 litres
Mechanical compliance	Cms	0.275 mm/N
BL product	Bl	14.7 T.m
Voicecoil diameter	d	45 mm
Voicecoil material		copper
Voicecoil DC resistance	Re	11.6 ohms
Voicecoil inductance	Lvc	0.94 mH
Voicecoil height		22.0 mm
Height of air-gap	Hg	8 mm
Peak linear displacement	Xpk	>6.0 mm
X Damage peak to peak	Xpk-pk	19.6 mm
Reference efficiency		1.2 %
Speaker total mass		2.42 kgm

Specifications subject to change without notice.

Notes

- (1) AES power is determined according to AES2-1984 standard in free-air 60Hz-600Hz.
- (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 for the speaker mounted in free-air.
- (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 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 is >6mm at 82%.

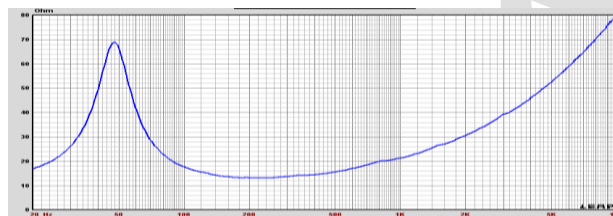
Frequency Response



Infinite baffle sound pressure response recorded at 4V, or nominal one watt at one meter.

- Blue curve is on axis spl response
- Green curve is SPL at 30 degrees off axis.
- Orange curve is SPL at 40 degrees off axis

Impedance plot



Free-air impedance magnitude plot.