MODEL: AC304U50-MI-8 12” Guitar 50W

Description

A hand crafted Australian made ferrite magnet electric guitar loudspeaker made to reproduce vintage 70’s tonal characteristics. To achieve this where possible materials and processes used in the 70’s have been employed to regain the classic vintage sound. This model employs our larger “U” ferrite magnet producing a very efficient loud speaker. The magnet assembly has been FE optimized and the magnet components CNC machined in house to tight tolerances to achieve high efficiency at minimum weight and finished in e-coat for superior corrosion resistance.

The 50W cone is produced in house from ex Rola tooling under our control from a blend of natural renewable Eucalypt and Hemp fibres; this fibre formulation and processing delivers the classic Australian guitar signature and replicated by many rivals. The paper blend and processing is based upon prior art and research developed and refined over 30 years of in-house paper cone production. The optimum blend also optimised from user feedback.

This model employs a copper voice-coil wound onto glass fibre bobbin to emulate the seventies sound, this prior art delivers the 50W power rating. The voice-coil is adhered to the cone body with a selected adhesive to ensure reliable performance but retain the seventies voicing characteristics.

The refined combination of materials and processing emulate the detailed guitar tone typical of the 70’s.

This Australian hand crafted model is an excellent choice for serious musicians where high efficiency, classic 70’s performance and high reliability are desired.

Application

Use with amplifiers rated up to 50W per loudspeaker. The “U” model has a tighter bass and more output over the “P” range. This model has been designed to deliver cone breakup at 25W thereby delivering vintage tone with crunch and overdriven character at rated power.

Options

Model	Impedance
AC304U50-MI-8	8 ohm
AC304U50-MI-16	16 ohm

This datasheet applies to our AC304U50-MI-8 model.

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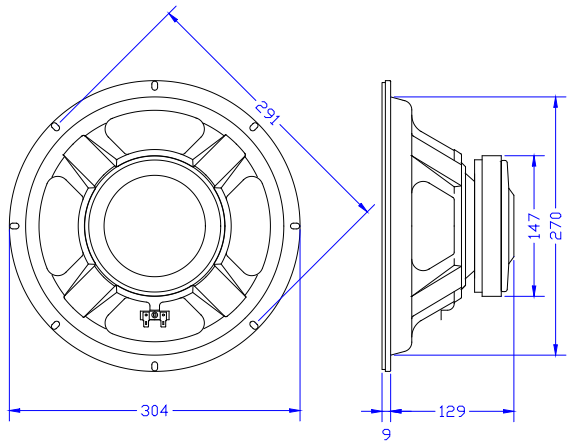
Technical Data

Typical measured Thiele/Small parameters

Maximum program power		= 50 watt
Thermal power rating		= 50 watt rms
Rated nominal impedance	Z	= 8 ohms
Rated frequency range		= 60 - 6000 Hz
Piston sensitivity level		= 99 dBSPL
Max SPL @ 1w		= 107 dBSPL
Resonance frequency		= 80 Hz
Mechanical Q	Qm	= 12.3
Electrical Q	Qe	= 0.48
Total spk. Q	Qts	= 0.46
Diaphragm mass	Mmd	= 23.9 gms
Effective diaphragm diameter	D	= 23.8 cm
Effective diaphragm area	Sd	= 0.050 sq.m.
Vol. equiv to spk compliance	Vas	= 48 litres
Mechanical compliance	Cms	= 0.131 mm/N
BL product	Bl	= 14.2 T.m
Voicecoil diameter	d	= 45 mm
Voicecoil material		= Copper
Bobbin material		= Glass fiber
Voicecoil DC resistance	Re	= 6.5 ohms
Voicecoil inductance @ 1kHz	Lvc	= 0.97 mH
Voicecoil height		= 10 mm
Height of air-gap	Hg	= 8 mm
Peak linear displacement	Xpk	= 1.0 mm
Reference efficiency		= 4.9 %
Speaker total mass		= 3800 gms

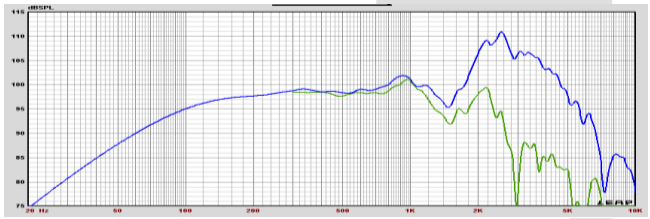
Specifications subject to change without notice.

Mounting Details



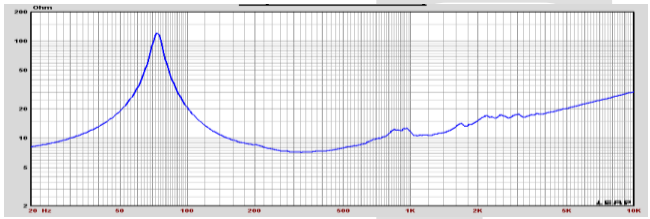
Baffle opening diameter
front mounting 273 mm
rear mounting 273 mm
Mounting pattern:
eight 6 x 9 mm slots equi-spaced on 291 mm PCD.
Flange thickness 9 mm

Frequency Response



Infinite baffle sound pressure response recorded at 2.83V at one meter.
Blue curve - on axis spl response
Green curve - 30 degrees off axis response

Impedance plot



Free-air impedance magnitude plot.

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