8CX401F

High Output Coaxial Ferrite Transducer

KeyFeatures

- 95dB SPL 1W / 1m average sensitivity
- 280W LF - 50W HF power handling
- 51mm (2 inches) LF Interleaved Sandwich Voice coil (ISV)
- 25,4mm (1 inch) HF driver edgewound voice coil
- 90 degrees coverage pattern
- Ideal for compact reflex applications

Description

The 8CX400F coaxial transducer is a 8 inch - 1 inch coaxial driver combining excellent linearity with good efficiency and power handling capabilities.

It is primarily intended for compact reflex enclosures and, because of its versatile characteristics, may also be used in multiway systems or ceiling applications. Its nominal dispersion is 90 degrees.

The curvilinear, paper LF section cone is formed using a unique wood pulp composition designed to achieve the best possible rigidity and stiffness. A polycotton multiroll surround to provide increased excursion whilst controlling break up modes carries it.

The 51mm Ø state-of-the-art, aluminum wire voice coil employees same technology of that fitted to our top-of-the-range models using our Interleaved Sandwich Voice coil (ISV) technology. In essence, a high strength Fiberglas former is used to carry windings on both the outer and inner surfaces to achieve a mass balanced coil. This

results in an extremely linear motor assembly, which, in conjunction with the highly advanced design of the magnetic structure, provides a high force factor or BL.

The high frequency driver incorporates a polyester material diaphragm for best movement and stress control; the special radialribs increase stiffness avoiding uncontrolled vibration modes in the usable frequency range. An edge-wound copper clad aluminum voice coil wounded on treated Nomex completes the diaphragm assembly.

A computer aided FEA has been used in order to maximize the cone profile coupling and to control the energy in the desired frequency range.

A dedicated high quality passive crossover network is available upon request.

With the increasing use of outdoor audio events, the ability to perform in humid environments is another feature of the 8CX400F. This is achieved by means of exclusively developed humidity repellent cone treatment.

Models

Model	Code	Info
022088CX20	022088CX20	8 Ohm
03708XCR00	03708XCR00	Passive Crossover

18 EIGHTEEN SOUND
PROFESSIONAL LOUDSPEAKERS

General Specifications

Nominal Diameter	200 mm (8 in)
Rated Impedance	8 Ohm
AES Power	280 W
Program Power	400 W
Peak Power	800 W
Sensitivity	95 dB
Frequency Range	65 - 6100 Hz
Power Compression @-10dB	0,5 dB
Power Compression @-3dB	1,4 dB
Max Recomm. Frequency	2800 Hz
Recomm. Enclosure Volume	10 - 40 lt. (0,35 - 1,41 cuft)
Minimum Impedance	6,1 Ohm at 25°C
Max Peak To Peak Excursion	19 mm (0,75 in)
Voice Coil Diameter	51 mm (2 in)
Voice Coil winding material	Edge-wound Aluminum
Suspension	M-roll, Polycotton
Cone	Curvilinear, Paper

Thiele Small Parameters

Fs	56 Hz
Re	5 Ohm
Sd	0,0227 sq.mt. (35,2 sq.in.)
Qms	3,23
Qes	0,38
Qts	0,34
Vas	23,9 lt. (0,85 cuft)
Mms	18 gr. (0,04 lb)
BL	9,3 Tm
Linear Mathematical Xmax	± 5,8 mm (± 0,23 in)
Le (1kHz)	0,96 mH
Half space efficiency	93,7 dB

Mounting information

Overall diameter	210 mm (8,27 in)
N. of mounting holes and bolt	6
Mounting holes diameter	6,25 mm (0,25 in)
Bolt circle diameter	195 - 198 mm (7,68 - 7,80 in)
Front mount baffle cutout ø	186 mm (7,32 in)
Rear mount baffle cutout ø	184 mm (7,24 in)
Total depth	150,5 mm (5,93 in)
Flange and gasket thickness	14,5 mm (0,57 in)
Net weight	4,4 kg (9,76 lb)
Shipping weight	5,0 kg (11,1 lb)
Packaging Dimensions	5,0 kg (11,1 lb)
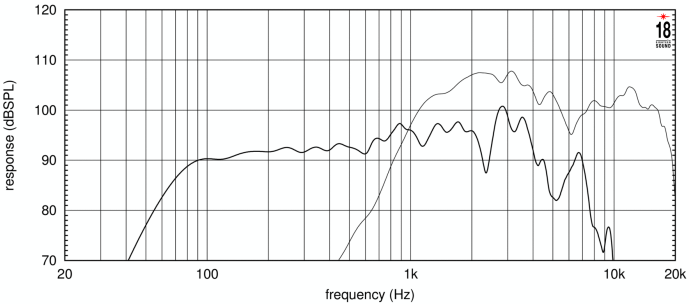
FREQUENCY RESPONSE CURVE OF 8CX400 MADE ON 25LT ENCLOSURE TUNED AT 65HZ IN FREE FIELD (4PI) ENVIRONMENT. ENCLOSURE CLOSES THE REAR OF THE DRIVER. THE THIN LINE REPRESENTS HIGH FREQUENCY RESPONSE

FREE AIR IMPEDANCE MAGNITUDE CURVE

Notes

1) AES power is determined according to AES2-1984 (r2003) standard Program power rating is measured in 25lit enclosure tuned 65Hz using a 60 - 2000Hz band

2) limited pink noise test signal with 50% duty cycle, applied for 2 hours.

3) The peak power rating represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which will be withstood by the loudspeaker whituout damage.

4) Sensitivity represents the averaged value of acoustic output as measured on the forward central axis of cone, at distance 1m from the baffle panel, when connected to 2,83 V sine wave test signal swept between 500Hz and 2500Hz with the test specimen mounted in the same enclosure as given for (1) above.

5) Frequency range is given as the band of frequencies delineated by the lower and upper limits where the output level drops by 10 dB below the rated sensitivity in 1/2 space

6) environment.

7) Power compression represents the loss of sensitivity for the specified power, measured from 50-500 Hz, after a 5 min pink noise preconditioning test at the specified power.

8) AES power rating is tested with a pink noise input having a 6 dB crest factor for two hours duration. Power calculated on minimum impedance.

9) Program power is defined as 3 dB greater than AES power rating, and is a conservative expression of the transducer ability to handle music program material.

10) Sensitivity is measured on 1W input on rated impedance at 1m on axis from the mouth of the transducer and averaged in 3kHz band.

11) Thiele - Small parameters are measured after the test specimen has been conditioned by 280 W AES power and represent the expected long term parameters after a short period of use.

12) Linear Mat. Xmax is calculated as (Hvc-Hg)/2 + Hg/4. Hvc is the coil depth and Hg is gap depth.

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