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PROFESSIONAL LOUDSPEAKERS
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3FR30

FULL RANGE FREQUENCY TRANSDUCER
Preliminary Data Sheet

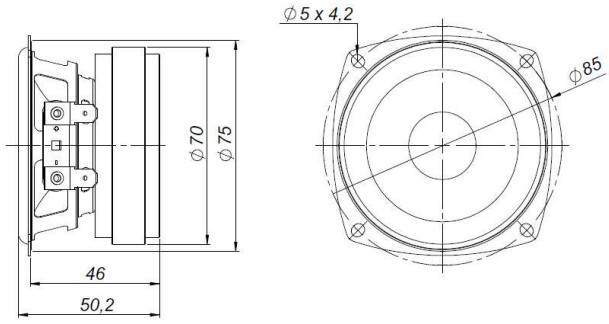
KEY FEATURES

- 3” full-range compact ferrite loudspeaker
- 60 W program power
- Extended response and low distortion
- Demodulation copper cap for constant impedance curve
- Paper cone and treated cloth surround
- Steel basket
- Ideal for beam-steering application (columns), portable array and compact applications

TECHNICAL SPECIFICATIONS

Nominal diameter	77 mm	3 in
Rated impedance		8 Ω
Minimum impedance		6,5 Ω
Power capacity*		30 W_{AES}
Program power		60 W
Sensitivity	91 dB	1W / 1m @ Z_N
Frequency range		160 - 20.000 Hz
Voice coil diameter	20,3 mm	0,8 in
Bl factor		4,9 N/A
Moving mass		0,0022 kg
Voice coil length		10,5 mm
Air gap height		3 mm

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, f_s	160 Hz
D.C. Voice coil resistance, R_e	5,6 Ω
Mechanical Quality Factor, Q_{ms}	8
Electrical Quality Factor, Q_{es}	0,52
Total Quality Factor, Q_{ts}	0,49
Equivalent Air Volume to C_{ms}, V_{as}	0,67 l
Mechanical Compliance, C_{ms}	430 μm / N
Mechanical Resistance, R_{ms}	0,28 kg / s
Efficiency, η_0	0,5 %
Effective Surface Area, S_d	0,003 m^2
Maximum Displacement, X_{max} * **	4,5 mm
Displacement Volume, V_d	13,5 cm^3
Voice Coil Inductance, L_e @ 1 kHz	0,25 mH

MOUNTING INFORMATION

Overall diameter	93,5 mm	3,68 in
Bolt circle diameter	85 mm	3,35 in
Baffle cutout diameter:		
- Front mount	75,9 mm	2,98 in
Depth	46 mm	1,81 in
Net weight	0,57 kg	1,25 lb
Shipping weight	0,70 kg	1,54 lb

Notes:

* The power capacity is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer’s ability to handle normal music program material.

** T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

*** The X_{max} is calculated as $(L_{vc} - H_{ag})/2 + (H_{ag}/3,5)$, where L_{vc} is the voice coil length and H_{ag} is the air gap height.

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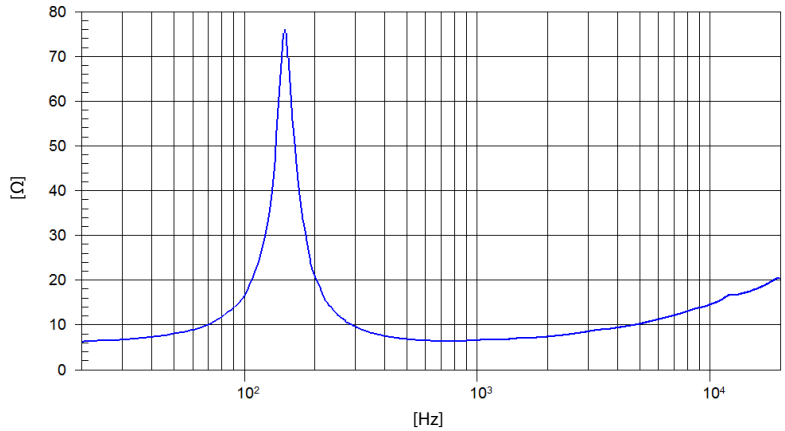
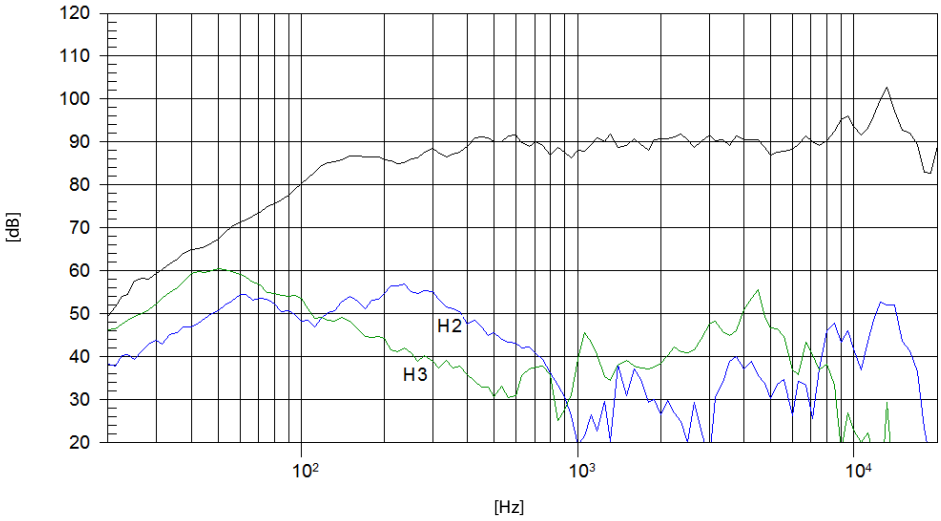
FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE AND DISTORTION



Note: On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

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