FULL RANGE FREQUENCY TRANSDUCER
Preliminary Data Sheet

## KEY FEATURES

- 4" full-range compact ferrite loudspeaker
- 80 W program power
- Extended response and low distortion
- Paper cone and Santoprene ${ }^{\text {TM }}$ surround


TECHNICAL SPECIFICATIONS

| Nominal diameter | 100 mm | 4 in |
| :--- | ---: | ---: |
| Rated impedance | $8 \Omega$ |  |
| Minimum impedance |  | $7,3 \Omega$ |
| Power capacity ${ }^{1}$ |  | $400 \mathrm{~W}_{\text {AES }}$ |
| Program power ${ }^{2}$ |  | 800 W |
| Sensitivity | 87 dB | $1 \mathrm{~W} / 1 \mathrm{~m} @ \mathrm{Z}_{\mathrm{N}}$ |
| Frequency range | $100-20.000 \mathrm{~Hz}$ |  |
| Voice coil diameter | $20,3 \mathrm{~mm}$ | $0,8 \mathrm{in}$ |
| BI factor | $4,2 \mathrm{~N} / \mathrm{A}$ |  |
| Moving mass | $0,0044 \mathrm{~kg}$ |  |
| Voice coil length | $7,7 \mathrm{~mm}$ |  |
| Air gap height |  | 5 mm |

- Pressed steel basket
- Ceramic magnet
- Ideal form beam-steering application (columns), portable array and compact applications



## THIELE-SMALL PARAMETERS ${ }^{3}$

| Resonant frequency, $\mathbf{f}_{\mathbf{s}}$ | 92 Hz |
| :--- | ---: |
| D.C. Voice coil resistance, $\mathbf{R}_{\mathbf{e}}$ | $6,4 \Omega$ |
| Mechanical Quality Factor, $\mathbf{Q}_{\mathbf{m s}}$ | 11,3 |
| Electrical Quality Factor, $\mathbf{Q}_{\mathbf{e s}}$ | 0,96 |
| Total Quality Factor, $\mathbf{Q}_{\mathbf{t s}}$ | 0,88 |
| Equivalent Air Volume to $\mathbf{C}_{\mathbf{m s}}, \mathbf{V}_{\text {as }}$ | $2,8 \mathrm{l}$ |
| Mechanical Compliance, $\mathbf{C}_{\mathbf{m s}}$ | $668 \mu \mathrm{~m} / \mathrm{N}$ |
| Mechanical Resistance, $\mathbf{R}_{\mathbf{m s}}$ | $0,23 \mathrm{~kg} / \mathrm{s}$ |
| Efficiency, $\boldsymbol{\eta}_{\mathbf{0}}$ | $0,22 \%$ |
| Effective Surface Area, $\mathbf{S}_{\mathbf{d}}$ | $0,0055 \mathrm{~m}^{2}$ |
| Maximum Displacement, $\mathbf{X}_{\text {max }}$ | 3 mm |
| Displacement Volume, $\mathbf{V}_{\mathbf{d}}$ | $11 \mathrm{~cm}^{3}$ |
| Voice Coil Inductance, $\mathbf{L}_{\mathbf{e}}$ @ 1 kHz | $0,2 \mathrm{mH}$ |

[^0]

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

- Frequency response on axis



## MOUNTING INFORMATION

Overall diameter
Bolt circle diameter

## Baffle cutout diameter:

| Baffle cutout diameter: |  |  |
| :--- | :--- | :--- |
| - Front mount | 92 mm | $3,6 \mathrm{in}$ |
| Depth | 60 mm | $2,4 \mathrm{in}$ |
| Net weight | $0,55 \mathrm{~kg}$ | $1,2 \mathrm{lb}$ |
| Shipping weight | $0,75 \mathrm{~kg}$ | $1,6 \mathrm{lb}$ | $108,2 \mathrm{~mm} \quad 4,3 \mathrm{in}$

DIMENSION DRAWING




[^0]:    Notes:
    ${ }^{1}$ The power capaticty is determined according to AES2-1984 (r2003) standard.
    ${ }^{2}$ Program power is defined as power capacity +3 dB .
    ${ }^{3} \mathrm{~T}$-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).
    ${ }^{4}$ The $X_{\text {max }}$ is calculated as $\left(L_{v c}-H_{a g}\right) / 2+\left(H_{a g} / 3,5\right)$, where $L_{v c}$ is the voice coil length and $H_{\mathrm{ag}}$ is the air gap height.

