

# **12BR70**

#### **LOW FREQUENCY TRANSDUCER**

# **KEY FEATURES**

- 250 W program power
- Sensitivity: 93 dB (1W / 1m)
- 2" copper voice coil
- Ferrite magnet

- Extended controlled displacement: X<sub>max</sub> ± 8 mm
- 26 mm peak-to-peak excursion before damage
- Designed for low frequency reproduction





#### **TECHNICAL SPECIFICATIONS**

| Nominal diameter                   | 300 mm     | 12 in                     |
|------------------------------------|------------|---------------------------|
| Rated impedance                    |            | 8 Ω                       |
| Minimum impedance                  |            | 6,6 Ω                     |
| Power capacity <sup>1</sup>        |            | 125 W <sub>RMS</sub>      |
| Program power <sup>2</sup>         |            | 250 W                     |
| Sensitivity                        | 93 dB 1W   | / 1m @ Z <sub>N</sub>     |
| Frequency range                    | 35         | - 4.000 Hz                |
| Recom. enclosure vol.              | 50 / 120 I | 1,8 / 4,2 ft <sup>3</sup> |
| Voice coil diameter                | 50,8 mm    | 2 in                      |
| BI factor                          |            | 12,1 N/A                  |
| Moving mass                        |            | 0,074 kg                  |
| Voice coil length                  |            | 19 mm                     |
| Air gap height                     |            | 7 mm                      |
| X <sub>damage</sub> (peak to peak) |            | 26 mm                     |
|                                    |            |                           |

#### THIELE-SMALL PARAMETERS<sup>3</sup>

| Resonant frequency, f <sub>s</sub>                         | 31 Hz                |
|--|----------------------|
| D.C. Voice coil resistance, R <sub>e</sub>                 | 5,6 Ω                |
| Mechanical Quality Factor, Q <sub>ms</sub>                 | 4,4                  |
| Electrical Quality Factor, Qes                             | 0,56                 |
| Total Quality Factor, Q <sub>ts</sub>                      | 0,50                 |
| Equivalent Air Volume to C <sub>ms</sub> , V <sub>as</sub> | 142 I                |
| Mechanical Compliance, C <sub>ms</sub>                     | $345~\mu m$ / $N$    |
| Mechanical Resistance, R <sub>ms</sub>                     | 3,3 kg / s           |
| Efficiency, η <sub>0</sub>                                 | 0,8 %                |
| Effective Surface Area, S <sub>d</sub>                     | 0,054 m <sup>2</sup> |
| Maximum Displacement, X <sub>max</sub> <sup>4</sup>        | 8 mm                 |
| Displacement Volume, V <sub>d</sub>                        | 340 cm <sup>3</sup>  |
| Voice Coil Inductance, L <sub>e</sub>                      | 0,8 mH               |
|  |                      |

#### Notes

<sup>&</sup>lt;sup>1</sup> The power capaticty is determined according to AES2-1984 (r2003) standard.

<sup>&</sup>lt;sup>2</sup> Program power is defined as power capacity + 3 dB.

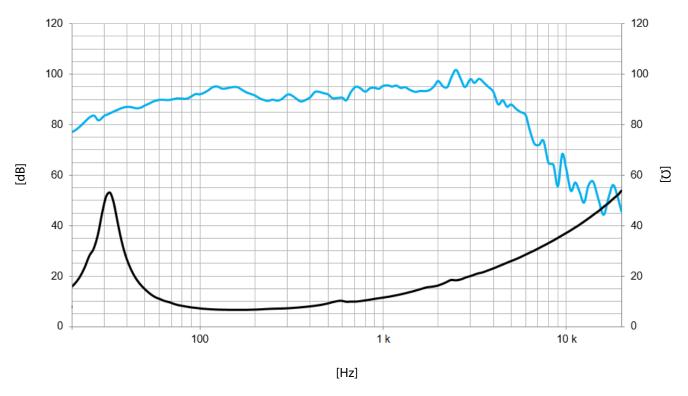
<sup>&</sup>lt;sup>3</sup> T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

 $<sup>^4</sup>$  The X<sub>max</sub> is calculated as (L<sub>vc</sub> - H<sub>ag</sub>)/2 + (H<sub>ag</sub>/3,5), where L<sub>vc</sub> is the voice coil length and H<sub>ag</sub> is the air gap height.





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

# **MOUNTING INFORMATION**

| Overall diameter        | 312 mm   | 12,3 in |
|-------------------------|----------|---------|
| Bolt circle diameter    | 294,5 mm | 11,6 in |
| Baffle cutout diameter: |          |         |
| - Front mount           | 278 mm   | 10,9 in |
| Depth                   | 134 mm   | 5,3 in  |
| Net weight              | 3,6 kg   | 7,9 lb  |
| Shipping weight         | 4,3 kg   | 9,5 lb  |

### **DIMENSION DRAWING**

