

HDS Exclusive 4" Midwoofer



Type Number: 830881

Features:

This High Definition Sound (HDS) line of products push the performance limits of midbass audio transducers in a range of sizes - from the standard 205mm (8-inch) model, down to the very small 106mm (4-inch) model. Feature-rich and utilizing copper for the lowest distortion possible, the high-end HDS Exclusive Series takes maximum advantage of over 80 years of R&D experience to help systems designers build the world's best audio products.

See architecture notes for [HDS Platform](#)

Driver Highlights: Nomex diaphragm, 26 mm coil, AL, CU, Phaseplug

See [Application Notes](#)

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Specs:

Electrical Data

| | | | |
|-----------------------|------|------|-----|
| Nominal impedance | Zn | 8 | ohm |
| Minimum impedance | Zmin | 6.8 | ohm |
| Maximum impedance | Zo | 30.6 | ohm |
| DC resistance | Re | 5.9 | ohm |
| Voice coil inductance | Le | 1 | mH |

T-S Parameters

| | | | |
|-------------------------|-----|------|-----------------|
| Resonance Frequency | fs | 81.2 | Hz |
| Mechanical Q factor | Qms | 2.31 | |
| Electrical Q factor | Qes | 0.55 | |
| Total Q factor | Qts | 0.45 | |
| Force factor | Bl | 6.4 | Tm |
| Mechanical resistance | Rms | 1.63 | Kg/s |
| Moving mass | Mms | 7.4 | g |
| Suspension compliance | Cms | 0.52 | mm/N |
| Effective cone diameter | D | 8.2 | cm |
| Effective piston area | Sd | 53 | cm ² |
| Equivalent volume | Vas | 2 | ltrs |
| Sensitivity (2.83V/1m) | | 84 | dB |
| Ratio BL/√(Re) | | 2.6 | |
| Ratio fs/Qts | F | 182 | |

Power handling

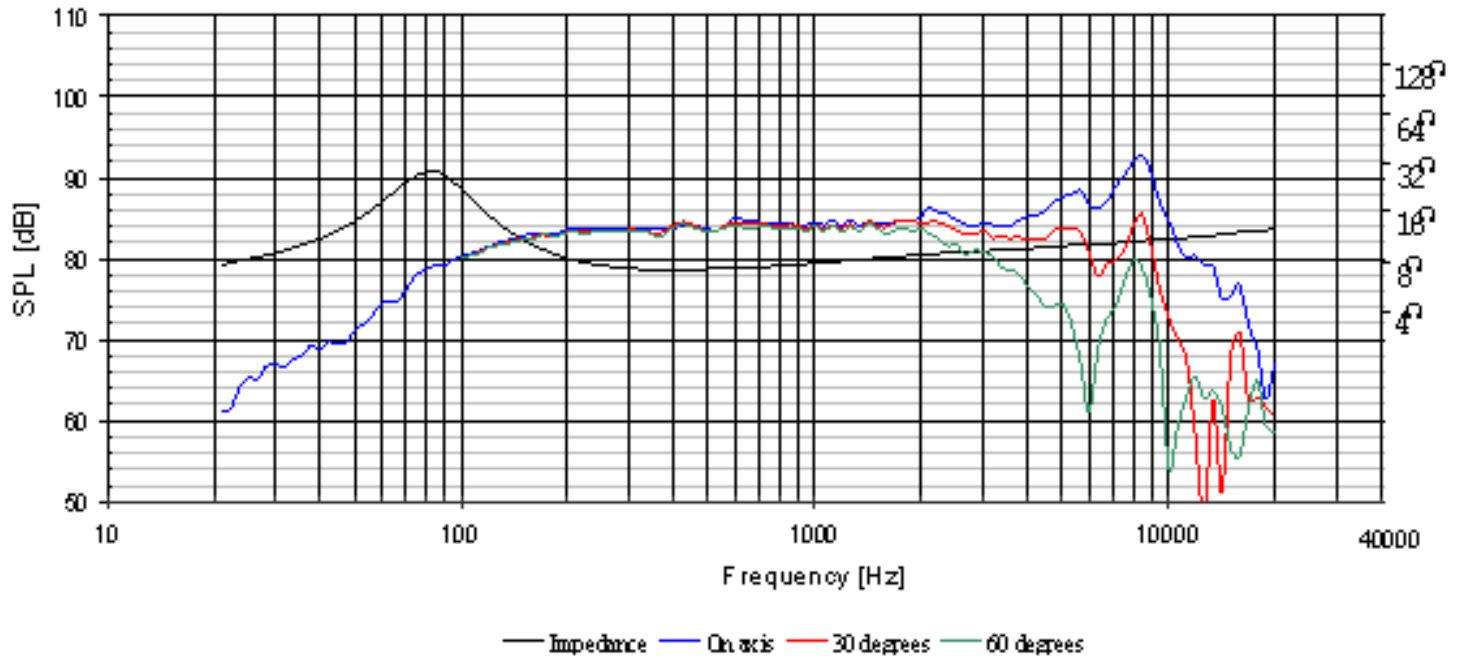
| | | |
|---------------------------------|----|------|
| 100h RMS noise test (IEC) | -- | W |
| Long-term Max Power (IEC 18.3) | -- | W |
| Max linear SPL (rms) @ power | -- | dB/W |
| Short Term Max power (IEC 18.2) | -- | W |

Voice Coil and Magnet Parameters

| | | |
|-------------------------|------|-----|
| Voice coil diameter | 26 | mm |
| Voice coil height | 13 | mm |
| Voice coil layers | 2 | |
| Height of the gap | 6 | mm |
| Linear excursion +/- | 3.5 | mm |
| Max mech. excursion +/- | -- | mm |
| Flux density of gap | -- | mWb |
| Total useful flux | 0.7 | mWb |
| Diameter of magnet | 81 | mm |
| Height of magnet | 15 | mm |
| Weight of magnet | 0.31 | Kg |

Notes:
IEC specs refer to IEC 60268-5 third edition.
All Tymphany products are RoHS compliant.

Frequency: 830881



Mechanical Dimensions:830881

