



4021

| | |
|-------------------------|--------------|
| Nominal Diameter | 12 " / 30 cm |
| Rated Impedance | 8 |
| Sensitivity | 91 dB SPL |
| Power Handling Capacity | 500 W AES |
| SPL max (continuous) | 114 dB SPL |
| Usable frequency range | 30 - 2000 Hz |
| Speaker net mass | 8.9 kg |

12 inches bass driver



Architecture highlights :

- Natural convection Intercooling System
- Both sides coated Curvilinear cone (Tropical withstanding)
- High compliance double half-roll fabric surround
- Added 45 g mass for low Fs

Motor architecture

| | | |
|---------------------|----|----|
| Magnet material | - | Fe |
| Voice coil diameter | mm | 77 |
| Voice coil length | mm | 20 |
| Air gap height | mm | 10 |

Typical characteristics

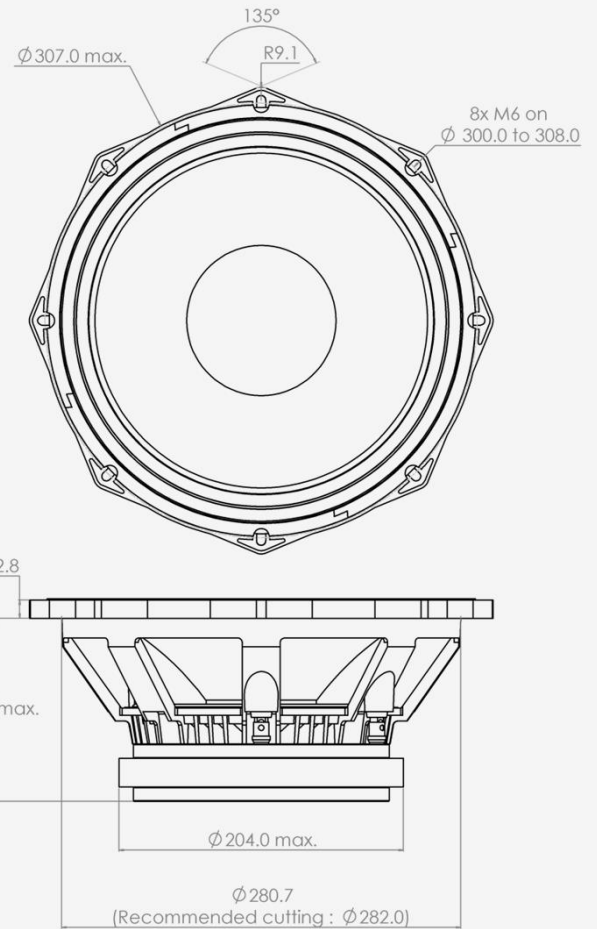
| | | | |
|--------------------------------|--------------------|--------------|-----------|
| Rated impedance | Z | Ω | 8 |
| Half space sensitivity (1W@1m) | - | dB SPL | 91.0 |
| Usable freq. range | - | Hz | 30 - 2000 |
| Power handling capacity (AES) | - | W | 500 |
| Max Sound Pressure Level | SPL _{max} | dB SPL | 114 |
| Min. impedance modulus | Z _{min} | Ω @Hz | 6.9@250 |
| Voice-coil inductance @ 1kHz | Le _{1k} | mH | 1.280 |
| Voice-coil inductance @ 10kHz | Le _{10k} | mH | 0.582 |
| BL product | BL | N/A | 20.5 |
| Moving mass | Mms | kg | 0.1230 |

Thiele-Small parameters

| | | | |
|----------------------------|----------------------|----------------------------------|------------------|
| Resonance frequency | Fs | Hz | 35 (\pm 5) |
| DC Resistance | Re | Ω | 5.6 (\pm 0.6) |
| Mechanical quality factor | Qms | 1 | 10.76 |
| Electrical quality factor | Qes | 1 | 0.36 |
| Total quality factor | Qts | 1 | 0.35 |
| Suspension compliance | Cms | 10 ⁻⁶ .m/N | 170 |
| Effective piston area | Sd | m ² | 0.0539 |
| Equivalent Cas air load | Vas | m ³ | 0.0700 |
| Max linear excursion | Xmax | mm | \pm 7.5 |
| Linear displacement volume | Vd | 10 ⁻³ .m ³ | 0.4043 |
| Reference efficiency | η_0 | % | 0.8 |
| Unity load volume | Vas.Qts ² | 10 ⁻³ .m ³ | 8.4 |

Absolute maximum ratings

| | | | |
|-------------------------------|------|--------------|------------|
| Short term max. input voltage | Vmax | V | 125 |
| Max.excursion before damage | Xdam | mm | \pm 14.0 |
| Ambient operating temperature | Ta | $^{\circ}$ C | -10 to +50 |
| Storage temperature | | $^{\circ}$ C | -20 to +70 |
| Environmental withstanding | | | Tropical |



Mounting information

| | | |
|--|----------------------------------|--------------------------------|
| Air volume occupied by the driver | 10 ⁻³ .m ³ | 2.70 |
| Speaker net mass | kg | 8.90 |
| Baffle cut-out diameter (front mounting) | mm | 282.0 |
| Bolt number & Metric diameter | - | 8x M6 |
| Bolt circle diameter | mm | 300 to 308 |
| Max overall dimension (on ears) | mm | 326.5 |
| Max overall dimension (out of ears) | mm | 307.0 |
| Flange height | mm | 12.8 |
| Max magnet diameter | mm | 204.0 |
| Max depth (front mounting) | mm | 128.5 |
| Recommended reflex box | Lts / Hz | - |
| Electrical connection | | \varnothing 4 mm Push button |

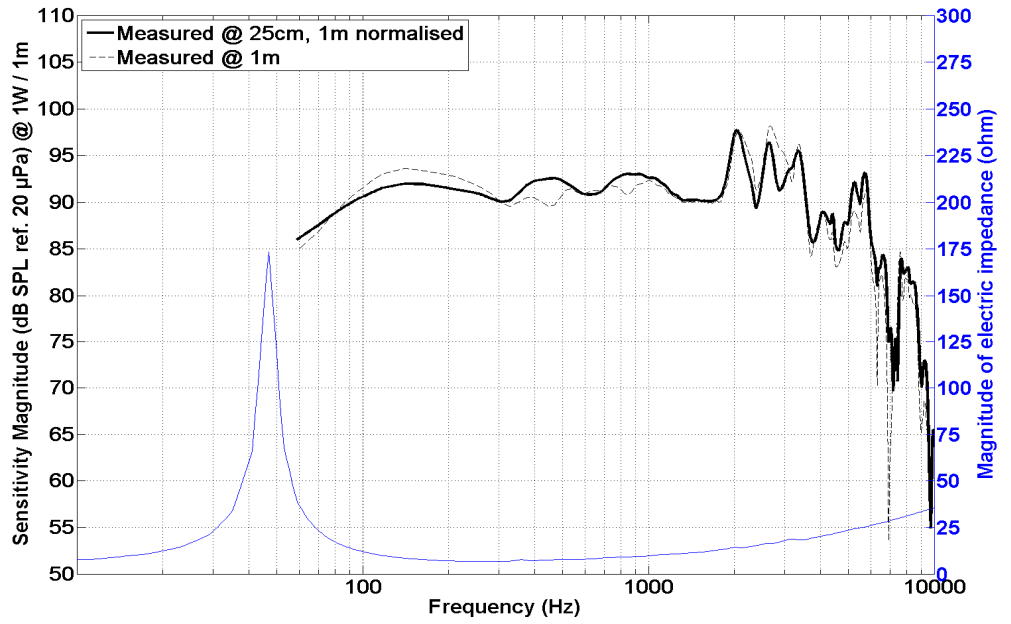


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12 inches bass driver

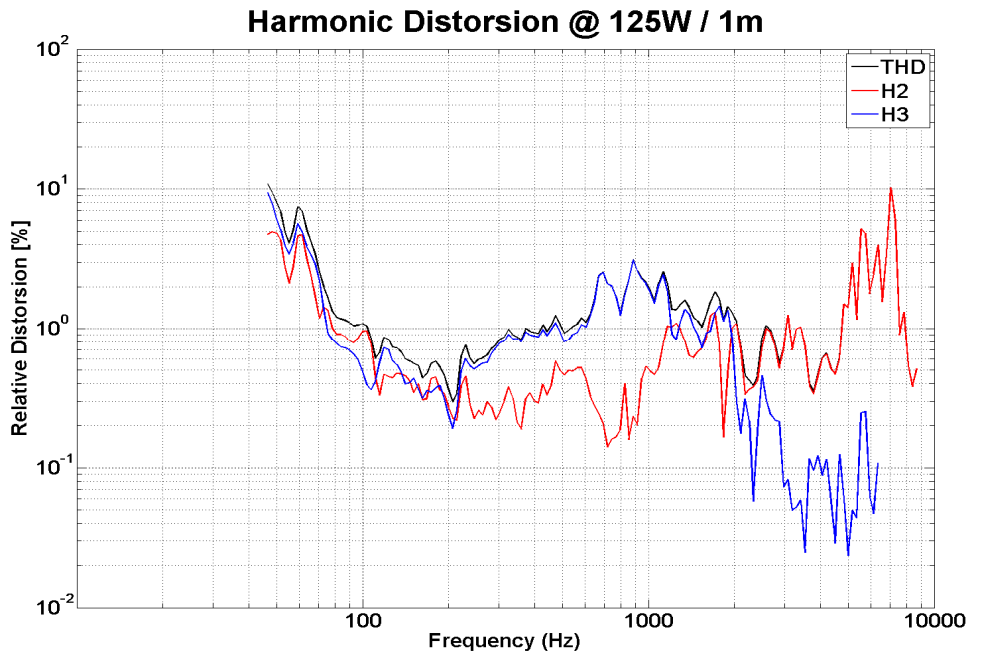
SPL curves measured on CEI standard baffle :

- . at 25 cm, normalised 1 m
- . at 1 m for reference
- . Graph amplitude = 60 dB (PHL Audio standard)



HD curve measured on CEI standard baffle :

- . at 1 meter
- . at power = $P_{AES} / 4$
- . Graph amplitude 0.01 % to 100 % (PHL Audio standard for $P_{AES}/4$)



Non linear curves measured thanks to Klippel software and hardware, in free air

