

# CX12N251

## COAXIAL

### DESCRIPTION

The CX12N251 is a lightweight coaxial driver with excellent linearity and high efficiency. The CX12N251 radiates a coherent single spherical wave front with perfect dispersion control. The design is powered from a large sized single neodymium ring magnet that provides an extremely high flux density and BL factor. The new hyper-vented aluminium basket and magnetic assembly design provide an excellent heat dissipation and lower power compression. Special air-forced ventilations are provided for voice coil, magnet assembly and basket. A 2,5" voice coil combined a strength fibreglass former and aluminium wire drives the mid-bass cone with high efficiency and a good extension. The 1,7" dome compression driver, loaded to a 60° conical waveguide, provides a clear vocal output and a perfect high frequency extension.



### FEATURES

- 600 Watt continuous program power handling
- 2.5-inch , fibreglass outside, aluminum voice coil
- 99.5 dB Sensitivity
- 50 Hz - 3.5 kHz Frequency range
- Dual-forced air ventilation for minimum power compression
- M-roll surround and exponential cone geometry
- Demodulation ring
- 100 Watt Continuous program power handling HF
- 1.75-inch Diaphragm, 1.0-inch Exit Throat
- Frequency range: 1200Hz – 20kHz

## TECHNICAL SPECIFICATIONS

### General specifications

|                                 |                     |
|---------------------------------|---------------------|
| Nominal Diameter:               | 12 inch / 305 mm    |
| Related Impedance:              | 8.00 ohm            |
| Program Power (watt):           | 600 W               |
| Power handling capacity (watt): | 300 W               |
| Sensitivity:                    | 99 dB               |
| Frequency range:                | 50 - 3500 Hz        |
| Effective piston diameter:      | 260 mm / 10.24 inch |
| Max. Excursion Before Damage:   | 30 mm / 1.18 inch   |
| Minimum Impedance (ohm):        | 6.40 ohm            |
| Voice Coil Diameter:            | 2.5 inch / 63 mm    |
| Voice Coil Material:            | Aluminium           |
| Voice Coil Winding Material:    | 2.5 inch / 63 mm    |
| Number of layers:               | 1                   |
| Kind of layers:                 | outside             |
| Top Plate Thickness:            | 8 mm / 0.31 inch    |
| Cone Design:                    | Curved              |
| Surround Material:              | Polycotton          |
| Surround Design:                | Triple roll         |
| Magnets:                        | Neodymium           |
| Dual-force air ventilation:     | Yes                 |
| Spider:                         | Single              |

### Thiele - small parameters

|                                      |                     |
|--------------------------------------|---------------------|
| Resonance frequency (Fs):            | 60 Hz               |
| DC resistance (Re) (ohm):            | 5.20 ohm            |
| Mechanical factor:                   | 5.40 Qms            |
| Electrical factor:                   | 0.28 Qes            |
| Total factor:                        | 0.26 Qts            |
| Bl factor (Bl) (T x m):              | 17.50 T x m         |
| Effective moving mass (Mms):         | 41 gr               |
| Equivalent Cas air loaded (Vas):     | 62.00 liters        |
| Effective piston area (Sd):          | 0.05 m <sup>2</sup> |
| Max. linear excursion (Xmax):        | 5 mm                |
| Voice coil inductance @ 1kHz (Le1k): | 1.20 mH             |
| Half-space efficiency (Eff):         | 5.20%               |

**General specifications driver**

|                                 |                     |
|---------------------------------|---------------------|
| Exit Throat Diameter:           | 1.0 inch / 25 mm    |
| Related Impedance:              | 8.00 ohm            |
| Program Power (watt):           | 100 W               |
| Power handling capacity (watt): | 50 W                |
| Sensitivity:                    | 109 dB              |
| Frequency range driver:         | 1200 - 20000 Hz     |
| Diaphragm Material:             | Polymide            |
| Suspension Material:            | Polymide            |
| Suspension Design:              | Flat                |
| Minimum Impedance (ohm):        | 6.50 ohm            |
| Voice Coil Diameter driver:     | 1.75 inch / 44 mm   |
| Voice Coil Material:            | Edgewound Aluminium |
| Number of layers:               | 1.00                |
| Kind of layers:                 | outside             |
| Flux Density:                   | 1.90 T              |
| Phase Plug Design:              | 2 slot              |
| Phase Plug Material:            | PP Composite        |
| Magnetics:                      | Neodymium           |

**General specifications horn**

|                            |                         |
|----------------------------|-------------------------|
| Throat Diameter:           | 25 mm / 1 inch          |
| Horizontal coverage angle: | 60°                     |
| Vertical coverage angle:   | 60°                     |
| Cut-off Frequency:         | 1800 Hz                 |
| Material:                  | Structural Polyurethane |

**Mounting informations**

|                                |                               |
|--------------------------------|-------------------------------|
| Overall diameter:              | 320 mm / 12.6 inches          |
| Bolt circle diameter:          | 295-304 mm / 11.61-11.97 inch |
| Bolt hole diameter:            | 6 mm / 0.24 inch              |
| Front mount baffle cut-out:    | 288 mm / 11.34 inch           |
| Rear mount baffle cut-out:     | 288 mm / 11.34 inch           |
| Volume occupied by the driver: | 2.4 liters / 0.09 ft3         |

**Standard compliance**

|             |     |
|-------------|-----|
| CE marking: | Yes |
|-------------|-----|

**Size**

|           |                      |
|-----------|----------------------|
| Height:   | 165 mm / 6.5 inches  |
| Diameter: | 320 mm / 12.6 inches |
| Weight:   | 3.6 kg / 7.94 lbs    |

**Shipping informations**

|                 |                       |
|-----------------|-----------------------|
| Package Height: | 214 mm / 8.43 inches  |
| Package Width:  | 339 mm / 13.35 inches |
| Package Depth:  | 354 mm / 13.94 inches |
| Package Weight: | 4.1 kg / 9.04 lbs     |

**PART NUMBER**

- **11100069**

CX12N251

8ohm



