

COAXIAL

CX10N251

Professional Coaxial Transducer

PART NUMBER **11100068**

The CX10N251 is a lightweight coaxial driver with excellent linearity and high efficiency. The CX10N251 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 fiberglass former and aluminium wire drives the mid-bass cone with high efficiency and a good extension.

MID-BASS DRIVER

- 600 Watt continuous program power handling
- 2.5-inch , fiberglass outside, aluminum voice coil
- 99 dB Sensitivity
- 65 Hz - 3.5 kHz Frequency range
- Dual-forced air ventilation for minimum power compression
- M-roll surround and exponential cone geometry
- Demodulation ring

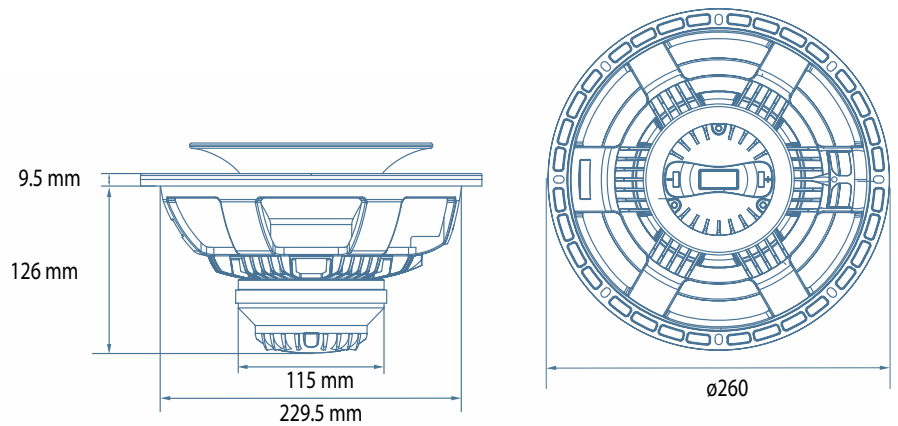
HF DRIVER

- 100 Watt Continuous program power handling
- 1.75-inch Diaphragm, 1.0-inch Exit Throat
- Frequency range: 1200Hz – 20kHz
- 2-slot, optimised geometry phase plug
- Polyester diaphragm
- Aluminum rear cover dissipation design

The 1,7" dome compression driver, loaded to a 60° conical waveguide, provides a clear vocal output and a perfect high frequency extension.

APPLICATIONS

The CX10N251 is the perfect lightweight solution for vocal applications, stage monitoring and compact 2-way reflex enclosures. Ideal in designs where a constant radial directivity pattern is a requirement.



65

3500

20

100

1.000

10.000

20.000

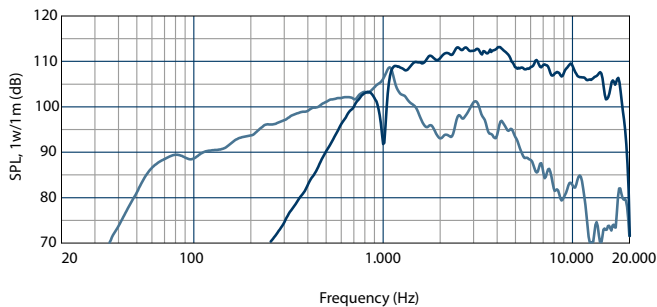


CX10N251 DRIVER

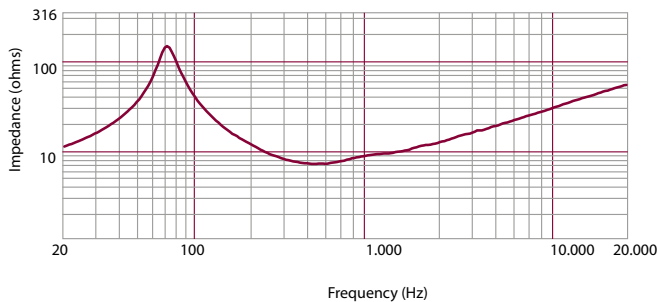
Nominal diameter	25.4/1.0	mm/inch
Rated impedance	8	ohm
Program power	100	Watts
Power handling capacity	50	Watts
Sensitivity 1W, 1m	109	dB
Frequency range	1200 - 20000	Hz
Minimum impedance	6.5	ohm
Voice Coil diameter	44.4/1.75	mm/inch
Voice Coil material	Edgewound Aluminum	
Number of layers	1- Outside	
Diaphragm material	Polyimide	
Diaphragm design	Dome	
Suspension material	Polyimide	
Suspension design	Flat	
BL factor	7.5	T x m
Flux density	1.9	T
Phase plug design	2 slot	
Phase plug material	Composite	
Magnetics	Neodymium	

CX10N251 HORN

Throat diameter	25.4/1.0
Nominal coverage (-6dB)	60°
Cut-off Frequency	1800
Material	Structural Polyurethane



Frequency response curve of the loudspeaker made in a hemispherical, free field and mounted in a reflex box with an internal volume of 50 litres and tuned at 60Hz, applying a sinusoidal signal of 2.83 V@8 at 1m.



Impedance magnitude curve measured in free air

NOTES TO SPECIFICATIONS

1 Program Power is defined as 3 dB greater than AES power. - 2 AES standard. - 3 Sensitivity measurement is based on a 500-2,5 kHz pink noise signal with input power of 2.83V @ 8 Ohms. - 4 Thiele-Small parameters are measured after a 2 hour warm up period running the loudspeaker at full power handling capacity. - 5 The maximum linear excursion is calculated as: $(Hvc - Hg)/2 + Hg/4$ where Hvc is the voice coil depth and Hg the gap depth. - 6 Calculated for front mounting on 18 mm thick board.
The data are not binding; RCF reserves the right to modify the data at any time and without previous notice.

GENERAL SPECIFICATIONS

Nominal Diameter	250/10	mm/inch
Rated Impedance	8	ohm
Program Power ¹	600	Watts
Power handling capacity ²	300	Watts
Sensitivity ³	99	dB
Frequency Range	65 - 3500	Hz
Effective Piston Diameter	210/8.27	mm/inch
Max Excursion Before Damage (peak to peak)	30/1.18	mm/inch
Minimum Impedance	6,4	ohm
Voice Coil Diameter	64/2.51	mm/inch
Voice Coil Material	Aluminum	
Voice Coil Winding Depth	14/0.55	mm/inch
Layers	outside	
Top Plate Thickness	8/0.31	
Cone Material	No pressed pulp	mm/inch
Cone Design	Curved	
Surround Material	Polycotton	
Surround Design	M-roll	
Demodulation Ring	Aluminum	

THIELE - SMALL PARAMETERS⁴

Resonance frequency	Fs	72	Hz
DC resistance	Re	5.2	ohm
Mechanical factor	Qms	4.5	
Electrical factor	Qes	0.25	
Total factor	Qts	0.23	
BL Factor	BL	17.5	T · m
Effective Moving Mass	Mms	28	gr
Equivalent Cas air load	Vas	25	liters
Effective piston area	Sd	0.035	m ²
Max. linear excursion (mathematical) ⁵	Xmax	4.8	mm
Voice - coil inductance @ 1KHz	Le1K	1.2	mH
Half-space efficiency	Eff	4.7	%

MOUNTING INFORMATION

Overall Diameter	260/10.24	mm/inch
Bolt Circle Diameter	241-246/9.50-9.60	mm/inch
Bolt Hole Diameter	5.5/0.22	mm/inch
Front Mount Baffle Cut-out	234/9.21	mm/inch
Rear Mount Baffle Cut-out	234/9.21	mm/inch
Depth	126/4.96	mm/inch
Volume occupied by the driver ⁶	2.1/0.7	liters/ft3

SHIPPING INFORMATION

Net Weight	3.1/6.83	Kg/Lbs
Shipping Weight	3.3/7.28	Kg/Lbs