

# COAXIAL CX12N351

Professional Low Frequency Transducer

The CX12N351 is a top class coaxial design that provides an excellent frequency response linearity with very low distortion. The CX12N351 is powered from an integrated high power neodymium magnetic structure that guarantee high dynamic and sensitivity for both components. The mid-bass section features a 3,5" inside-outside voice coil design that provides a very high power handling, especially in comparison to a standard 3" voice coil. Thanks to an integrated demodulation ring the mid-bass section gets a fastest time response and lower distortion. The compression driver use a 2.5" diaphragm with a 1.4" throat featuring several state of the art technologies. The diaphragm and suspension are formed from 0.05 mm thick pure titanium.

PART NUMBER 11100058

## Coax. Features

### MI-BASS

- 3.5-inch , fibreglass outside aluminum voice coil
- 900 Watt continuous program power handling
- 98.5 dB Sensitivity
- 50 Hz - 3.0 kHz Frequency range
- Dual-forced air ventilation for minimum power compression
- M-roll surround and exponential cone geometry
- Demodulation ring

### HF DRIVER

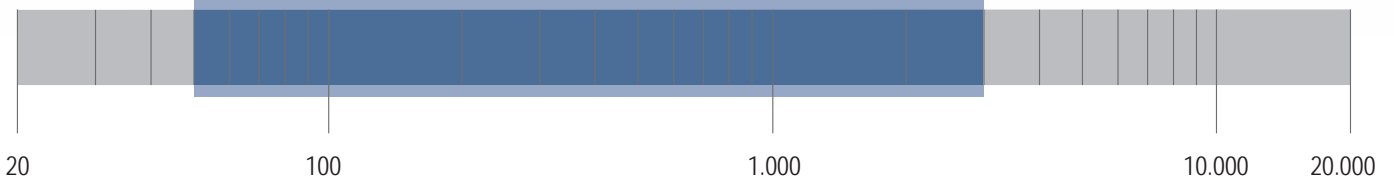
- 2.5-inch Diaphragm, 1.4-inch Exit Throat/pure titanium compression driver
- 180 Watt Continuous program power handling
- Frequency range: 700Hz – 20KHz
- Direct Drive Voice Coil Assembly
- 3-slot, optimised geometry phase plug
- Aluminum rear cover
- Copper inductance ring for extended response

## Applications

The CX12N351 coaxial transducer is ideal in premium quality applications where a perfect radial pattern, low distortion and curve response linearity are required. Perfect in high power stage monitors and compact high power reflex enclosures.



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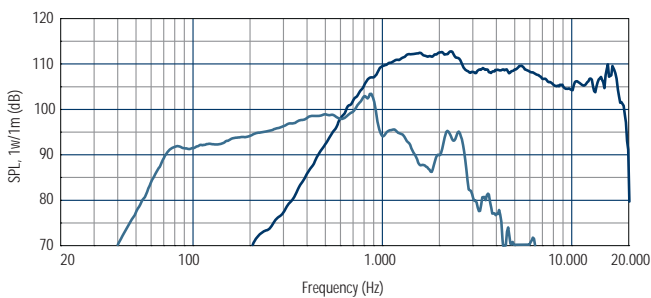


### CX12N351 DRIVER

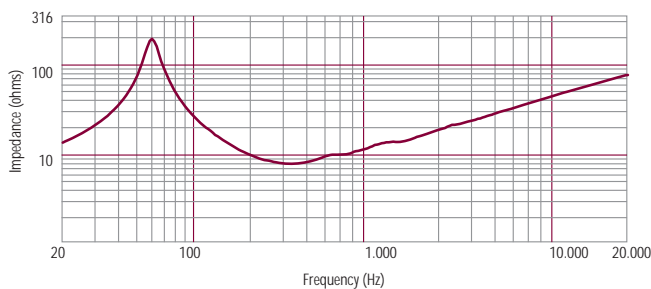
Nominal diameter	35.5/1.4	mm/inch
Rated impedance	8	ohm
Program power	180	Watts
Power handling capacity	90	Watts
Sensitivity 1W, 1m	110	dB
Frequency range	700 - 20000	Hz
Minimum impedance	7.9	ohm
Voice Coil diameter	63.7/2.5	mm/inch
Voice Coil material	Edgewound Aluminum	
Number of layers	1 - Outside	
Diaphragm material	Pure Titanium	
Diaphragm design	Dome	
Suspension material	Pure Titanium	
Suspension design	Progressive	
BL factor	10.4	T x m
Flux density	2.0	T
Phase plug design	3 slot	
Phase plug material	Aluminum	
Magnetics	Neodymium	
Voice Coil Demodulation	Copper Ring	

### CX12N351 HORN

Throat diameter	36/1.4
Nominal coverage (-6dB)	60°
Cut-off Frequency	900
Material	Structural Polyurethane



Frequency response curve of the loudspeaker taken in a reflex box with an internal volume of 80 litres tuned at 55 Hz.



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.

### General Specifications

Nominal Diameter	300/12	mm/inch
Rated Impedance	8	ohm
Program Power <sup>1</sup>	900	Watts
Power handling capacity <sup>2</sup>	450	Watts
Sensitivity <sup>3</sup>	98.5	dB
Frequency Range	50 - 3000	Hz
Effective Piston Diameter	260/13	mm/inch
Max Excursion Before Damage (peak to peak)	39/1.5	mm/inch
Minimum Impedance	6,8	ohm
Voice Coil Diameter	87/3.4	mm/inch
Voice Coil Material	Copper	
Voice Coil Winding Depth	16.5/0.65	mm/inch
Number of layers	2 - inside/outside	
Top Plate Thickness	11/0.43	
Cone Material	No pressed pulp	mm/inch
Cone Design	Curved	
Surround Material	Polycotton	
Surround Design	M-roll	
Magnetics	Neodymium	
Voice Coil Demodulation	Aluminum	

### Thiele - Small Parameters <sup>4</sup>

Resonance frequency	Fs	58	Hz
DC resistance	Re	5.8	ohm
Mechanical factor	Qms	5.4	
Electrical factor	Qes	0.21	
Total factor	Qts	0.20	
BL Factor	BL	25	T · m
Effective Moving Mass	Mms	62	gr
Equivalent Cas air load	Vas	47	liters
Effective piston area	Sd	0.053	m <sup>2</sup>
Max. linear excursion (mathematical) <sup>5</sup>	Xmax	5.5	mm
Voice - coil inductance @ 1KHz	Le1K	1.5	mH
Half-space efficiency	Eff	4.4	%

### Mounting Information

Overall Diameter	320/12.6	mm/inch
Bolt Circle Diameter	293-304/11.5-12	mm/inch
Bolt Hole Diameter	6.5/0.3	mm/inch
Front Mount Baffle Cut-out	284/11.2	mm/inch
Rear Mount Baffle Cut-out	284/11.2	mm/inch
Depth	184/7.2	mm/inch
Volume occupied by the driver <sup>6</sup>	2.2/0.77	liters/ft3

### Shipping Information

Net Weight	5.9/13	Kg/Lbs
Shipping Weight	6.7/14.7	Kg/Lbs