TYMPHANY

Transducer Specification Sheet

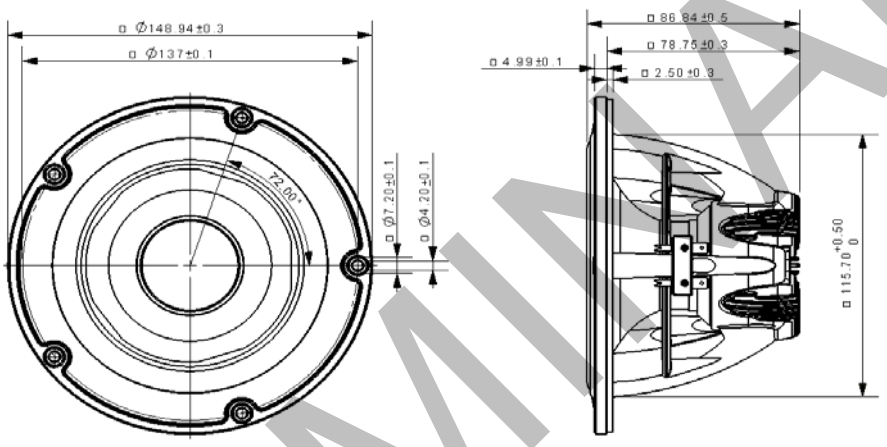
Model Number: NE149W-04
Description: Vifa NE Woofer 5.25"

Revision: rev 1_1
Date: 31-Aug-09

vifa

The Vifa NE product line has leading-edge transducer technology packaged in a cutting edge, stylistic design. The woofers in this product line feature an innovative cast aluminium basket design which minimizes acoustic reflections inside the driver, through large basket windows and sculpted basket spokes. The basket also is designed to act as a highly coupled heat sink to the Neodymium-Iron-Boron magnet (NdFeB) motor, so as to improve power handling capacity. An additional heat sink is available to provide extra thermal protection if needed. The cone and dust cap are constructed of natural wood fiber material with proprietary coating formulas & processes, so as to yield high clarity products. The cone designs also utilize pentacone technology for improved frequency response. The voice coil bobbin is titanium, for improved performance. The FEA-designed motor features copper caps to minimize inductance and extend performance to high frequencies. Rounding out the design is a 4-way terminal block connector, for ease of electrical connection.

Mechanical 2D Drawing:

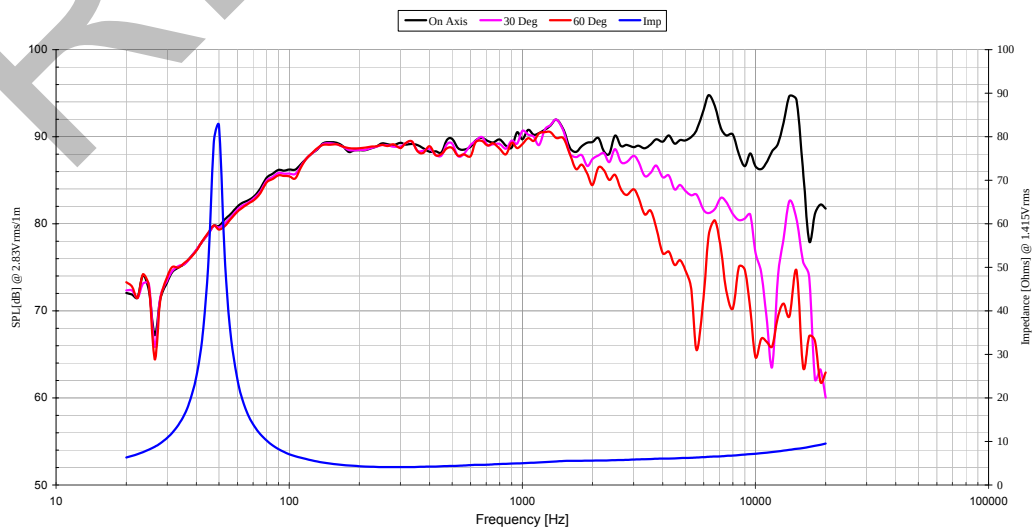


Specifications:

DC Resistance	R_{evc}	Ω	3.4
Minimum Impedance	Z_{min}	Ω	4.1
Voice Coil Inductance	L_e	mH	0.07
Resonant Frequency	f_s	Hz	52
Mechanical Q Factor	Q_{ms}	-	9.6
Electrical Q Factor	Q_{es}	-	0.35
Total Q Factor	Q_{ts}	-	0.33
Ratio f_s / Q_{ts}	F	f_s / Q_{ts}	156
Half Space Sensitivity @ 2.83V	dB@2.83V/1m	dB	89.1
Rated Noise Power (IEC 2685 18.1)	P	W	60
Test Spectrum Bandwidth	50 Hz - 5000Hz		12 dB/Oct

Energy Bandwidth Product	EBP	$(1/Q_{es})\cdot f_s$	150
Moving Mass	M_{ms}	g	10.48
Suspension Compliance	C_{ms}	um/N	899.6
Effective Cone Diameter	D	cm	10.3
Effective Piston Area	S_D	cm^2	83.3
Equivalent Volume	V_{as}	L	8.77
Motor Force Factor	BL	T·m	5.83
Motor Efficiency Factor	β	$(T\cdot m^2)/\Omega$	9.86
Voice Coil Former Material	VC_{fm}	-	TiSV
Voice Coil Inner Diameter	VC_d	mm	38.4
Maximum Linear Excursion	X_{max}	mm	5.00
Transducer Mass	-	kg	0.696

Frequency and Impedance Response:



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