

Model Number: NE85W-04  
Description: Vifa FR 2.5"

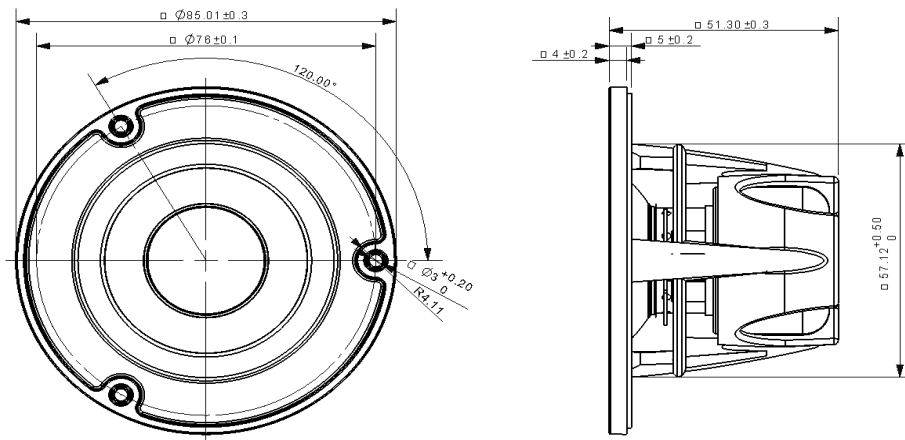
Revision: rev 1\_1  
Date: 31-Aug-09



The Vifa NE product line has leading-edge transducer technology packaged in a cutting edge, stylistic design. The full-range drivers 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. The cone is aluminium, with a butyl rubber surround designed through finite element analysis for linearity of performance. 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.



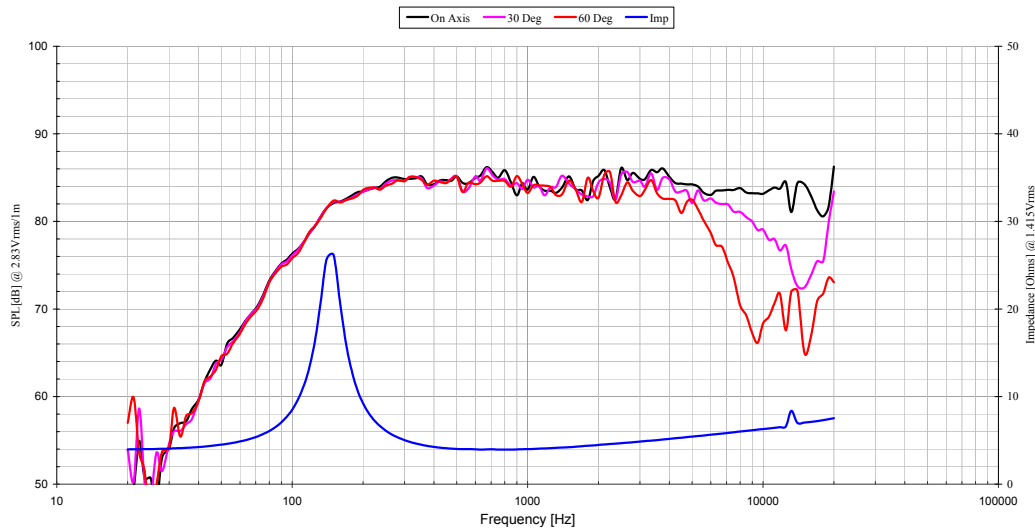
**Mechanical 2D Drawing:**



**Specifications:**

DC Resistance	$R_{\text{evc}}$	$\Omega$	3.5	Energy Bandwidth Product	EBP	$(1/Q_{\text{es}}) \cdot f_s$	226
Minimum Impedance	$Z_{\text{min}}$	$\Omega$	4.0	Moving Mass	$M_{\text{ms}}$	g	1.60
Voice Coil Inductance	$L_e$	mH	0.04	Suspension Compliance	$C_{\text{ms}}$	um/N	567.4
Resonant Frequency	$f_s$	Hz	167	Effective Cone Diameter	D	cm	4.3
Mechanical Q Factor	$Q_{\text{ms}}$	-	5.3	Effective Piston Area	$S_D$	cm <sup>2</sup>	14.7
Electrical Q Factor	$Q_{\text{es}}$	-	0.74	Equivalent Volume	$V_{\text{as}}$	L	0.17
Total Q Factor	$Q_{\text{ts}}$	-	0.65	Motor Force Factor	BL	T·m	2.83
Ratio $f_s / Q_{\text{ts}}$	F	$f_s / Q_{\text{ts}}$	257	Motor Efficiency Factor	$\beta$	$(T \cdot m^2) / \Omega$	2.27
Half Space Sensitivity @ 2.83V	$\text{dB} @ 2.83\text{V}/1\text{m}$	dB	84.8	Voice Coil Former Material	$\text{VC}_{\text{fm}}$	-	TiSV
Rated Noise Power (IEC 2685 18.1)	P	W	20	Voice Coil Inner Diameter	$\text{VC}_d$	mm	25.7
Test Spectrum Bandwidth	100Hz - 20000Hz	12 dB/Oct		Maximum Linear Excursion	$X_{\text{max}}$	mm	1.75
				Transducer Mass	-	kg	0.236

**Frequency and Impedance Response:**



F088-0713A