Model Number: PLS-P830985
Product Line: Peerless Gold

Revision: Rev 1_0
Date: 8-Sep-09

Peerless

Product Description:

This 2.5 inch 4 ohm member of the PLS family sets a high standard, for compact full range drivers intended for applications such as television soundbars and compact music systems. Design features in this family include a damped plastic basket with venting under the spider to aid cooling of the motor, a neodymium magnet motor with copper cap to lower coil inductance, providing low distortion at low frequencies and extended high frequency response. A black anodized aluminium cone is employed on the driver, along with a black anodized aluminium dust cap coupled directly to the voice coil. Additionally, the cones come equipped with special-designed large roll rubber surrounds, which allow for a dynamic linear response to high excursion input signals.

Mechanical 2D Drawing:

Specifications:
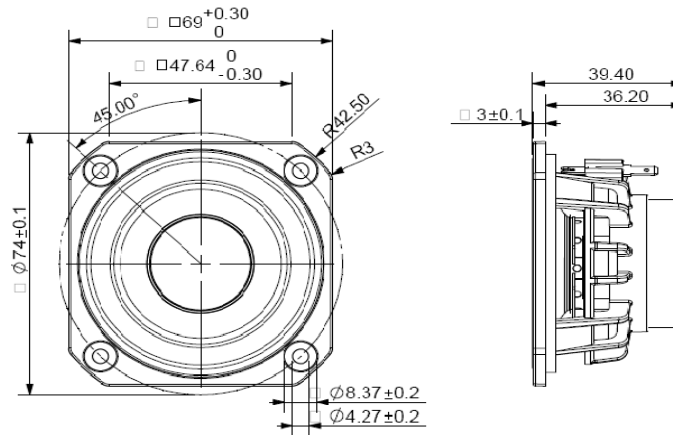
Parameter	Symbol	Unit	Value	Tol		Parameter	Symbol	Unit	Value
DC Resistance	R_{evc}	Ω	3.6	5.0%		Energy Bandwidth Product	EBP	$(1/Q_{es})·f_s$	156
Minimum Impedance	Z_{min}	Ω	4.0	7.5%		Moving Mass	M_{ms}	g	1.92
Voice Coil Inductance	L_e	mH	0.03			Suspension Compliance	C_{ms}	um/N	963.0
Resonant Frequency	f_s	Hz	117	15.0%		Effective Cone Diameter	D	cm	5.2
Mechanical Q Factor	Q_{ms}	-	4.1			Effective Piston Area	S_D	cm^2	21.2
Electrical Q Factor	Q_{es}	-	0.75			Equivalent Volume	V_{as}	L	0.61
Total Q Factor	Q_{ts}	-	0.63			Motor Force Factor	BL	T·m	2.61
Ratio f_s / Q_{ts}	F	f_s / Q_{ts}	185			Motor Efficiency Factor	β	$(T·m^2)/Ω$	1.88
Half Space Sensitivity @ 2.83V	dB@2.83V/1m	dB	84.6	+/-1.0 [1]		Voice Coil Former Material	VC_{fm}	-	Aluminum
Sensitivity @ 1W/1m	1W/1m	dB	83.0	+/-1.0 [1]		Voice Coil Inner Diameter	VC_d	mm	25.7
						Gap Height	Gh	mm	3.0
Rated Noise Power (IEC 2685 18.1)	P	W	10			Maximum Linear Excursion	X_{max}	mm	1.65
Test Spectrum Bandwidth	100Hz - 20kHz		12 dB/Oct			Ferrofluid Type	FF		N/A
						Transducer Size	-	inch	2.5
						Transducer Mass	-	kg	0.14

1 - Piston Band Sensitivity Tolerance

Frequency and Impedance Response:

F088-0713A