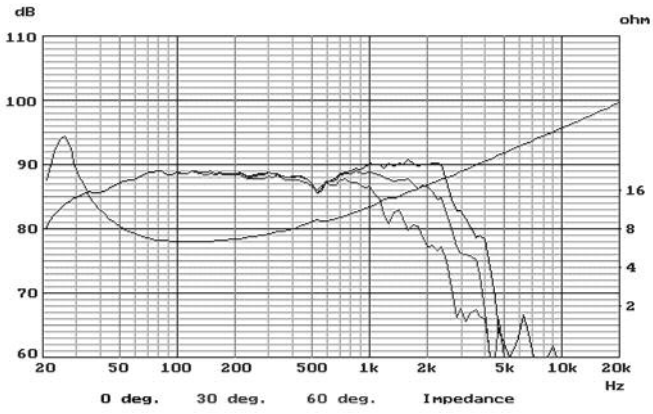
831857
12" HIGH END WOOFER POLYPROPYLENE

12" Woofer 315 SWR 39 134 PPX AL 4L 8ohm

The ultimate value for money HiFi 12" subwoofer driver with an over-sized magnet and a heavy voice coil securing a clean, fast, and dry bass performance even at high volumes. Although superceded by the new XLS range of woofers, this is a top of the range Peerless exceptional sound quality driver. Very popular in super low infrasonic subwoofer designs in home theater, etc. Very low distortion makes these drivers suitable to compliment any exceptional quality high range speakers. Features include a well damped polypropylene cone with low resonance rubber roll surround. Ventilated dust cap, large diameter 4 layer, aluminium voice coil for high power. Oversized 1.3Kg magnet and heavy duty voice coil for a clean, fast and dry bass performance at even high volume levels. Highly recommended for surround sound systems with THX performance or high end 3/4 way systems and subsonic supplementing.

Parameters:			Free air	Common	Baffled
Nominal impedance	Zn	(ohm)		8	
Minimum impedance/at freq.	Zmin	(ohm/Hz)		6.3/124	
Maximum impedance	Zo	(ohm)		46.9	
DC resistance	Re	(ohm)		5.5	
Voice coil inductance	Le	(mH)		2.8	
Capacitor in series with 8 ohm (for impedance compensation)	Cc	(µF)		24	
Resonance Frequency	fs	(Hz)	24.0		22.9
Mechanical Q factor	Qms		3.72		3.90
Electrical Q factor	Qes		0.49		0.52
Total Q factor	Qts		0.44		0.46
F (Ratio fs/Qts)	F	(Hz)			50
Mechanical resistance	Rms	(Kg/s)		3.25	
Moving mass	Mms	(g)	80.2		88.2
Suspension compliance	Cms	(mm/N)		0.55	
Effective cone diameter	D	(cm)		25.7	
Effective piston area	Sd	(cm²)		520.0	
Equivalent volume	VAS	(ltrs)		210.0	
Force factor	Bl	(N/A)		11.6	

Reference voltage sensitivity Re 2.83V 1m at 124 Hz (Measured)		(dB)	89.3
Voice coil diameter	d	(mm)	39
Voice coil length	h	(mm)	26.0
Voice coil layers	n		4
Flux density in gap	B	(T)	0.99
Total useful flux		(mWb)	1.52
Height of the gap	hg	(mm)	8
Diameter of magnet	dm	(mm)	134
Height of magnet	hm	(mm)	22
Weight of magnet		(kg)	1.28
Power handling:			
Long term Max System Power (IEC)		(W)	220
Max linear SPL (rms) / by power		(dB/W)	110/170
Code	831857		



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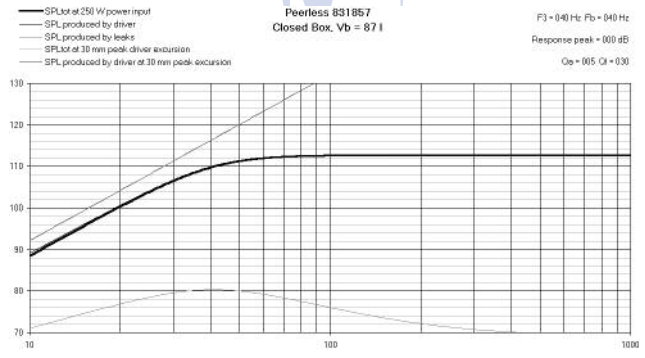
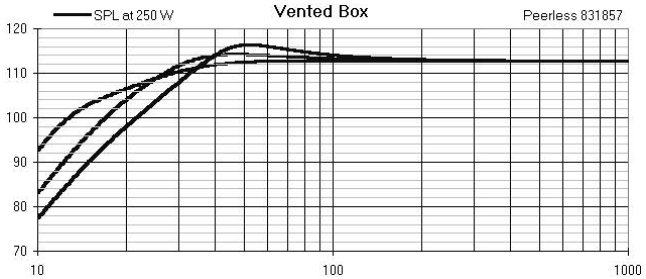
315SWR in a CLOSED BOX - *50 to 80L*

This premium quality polypropylene driver has a FS/QT ratio of 55. This indicates that this driver has relatively low damping and therefor most suitable for use in CLOSED BOX systems. A sealed enclosure of about 80L (about 2 to 3ft³) will give a smooth and controlled roll-off in the lower bass and infrasonic region. This predictable response generally reflects the gain of most rooms (if correctly positioned) and therefor gives a close to flat frequency characteristics at the listening position. The sealed box also adds to produce a dry firm bass sound that's free from typical boomy responses of some ported designs and thus this woofer has received an admirable reputation from audiophile connoisseurs. The accurate low mids produced by this driver makes it suitable for both SUB or MAIN speaker applications. The peerless 831857 also has extra low frequency exertion, this coupled with the protection afforded by a closed box design, will give you a sub that you can continue to turn up until your foundations are in danger. It will also respond to equalization without fear of retribution. *Beware!* An incredible amount of wattage will be yearned for and the box construction will have to be well braced.



315SWR PORTED - *80 - 160 L*

Because of the high VAS (210 L), a ported box for this speaker becomes rather large (120L or 4ft³ for F_3=25Hz). However, exceptionally low undistorted bass is possible from such a design. The simple mounting structure and shallow 10cm depth enable this driver to be used in many designs like isobaric, dipole, bandpass, etc. Here are some standard ported box suggestions:



ROCK & ELECTRONICA
BOX = 80L, PORT = 100 x 200mm, F_3 = 33Hz.

"THX®" THEATER
BOX = 120L, PORT = 100 x 220mm, F_3 = 25Hz.

CONNOISSEUR
BOX = 160L, PORT = 100 x 400mm, F_3 = 17Hz.