

# Thiele/Small Parameters

## 44L7S124

Name		Unit	Comment
Re	6.862	Ohm	electrical voice coil resistance at DC
Le	6.5136	mH	frequency independent part of voice coil inductance
Krm	0.0317	Ohm	WRIGHT inductance model
Ern	0.79		WRIGHT inductance model
Kxm	0.13468	Ohm	WRIGHT inductance model
Exm	0.67		WRIGHT inductance model
Cmes	521.256	$\mu$ F	electrical capacitance representing moving mass
Lces	49.084	mH	electrical inductance representing driver compliance
Res	106.604	Ohm	resistance due to mechanical losses
fs	31.54	Hz	driver resonance frequency
Mms	260.6774	g	mechanical mass of driver diaphragm assembly including air load and voice coil
Mmd	242.16	g	mechanical mass of voice coil and diaphragm without air load
Rms	4.7172	kg/s	mechanical resistance of total-driver losses
Cms	0.098	mm/N	mechanical compliance of driver suspension
Kms	10.228	N/mm	mechanical stiffness of driver suspension
Bl	22.3988	N/A	force factor (Bl product)
Lambda	0.041666667		suspension creep factor
Qtp	0.849		total Q-factor considering all losses
Qms	10.9542		mechanical Q-factor of driver in free air considering Rms only
Qes	0.7076		electrical Q-factor of driver in free air considering Re only
Qts	0.6642		total Q-factor considering Re and Rms only
Vas	57.68878	l	equivalent air volume of suspension
n0	0.2462	%	reference efficiency (2 pi-radiation using Re)
Lm	86.1	dB	characteristic sound pressure level (SPL at 1m for 1W @ Re)
Ln0m	86.766	dB	nominal sensitivity (SPL at 1m for 1W @ Zn)
rmse Z	2.158	%	root-mean-square fitting error of driver impedance Z(f)
rmse Hx	2.01	%	root-mean-square fitting error of transfer function Hx (f)
Sd	645.164	cm <sup>2</sup>	diaphragm area
Xmax	16.25	mm	