

# Thiele/Small Parameters

## 42CWQ154

Re	5.995	Ohm	electrical voice coil resistance at DC
Krm	0.0236	Ohm	WRIGHT inductance model
Erm	0.83		WRIGHT inductance model
Kxm	0.10725	Ohm	WRIGHT inductance model
Exm	0.72		WRIGHT inductance model
Cmes	487.425	µF	electrical capacitance representing moving mass
Lces	56.28	mH	electrical inductance representing driver compliance
Res	107.84	Ohm	resistance due to mechanical losses
fs	30.45	Hz	driver resonance frequency
Mms	373.217	g	mechanical mass of driver diaphragm assembly including air load and voice coil
Mmd	346.9575	g	mechanical mass of voice coil and diaphragm without air load
Rms	7.189	kg/s	mechanical resistance of total-driver losses
Cms	0.0735	mm/N	mechanical compliance of driver suspension
Kms	13.69	N/mm	mechanical stiffness of driver suspension
Bl	27.6775	Tm	force factor (Bl product)
Lambda	0.02		suspension creep factor
Qtp	0.68		total Q-factor considering all losses
Qms	9.9955		mechanical Q-factor of driver in free air considering Rms only
Qes	0.56		electrical Q-factor of driver in free air considering Re only
Qts	0.53		total Q-factor considering Re and Rms only
Vas	68.89415	l	equivalent air volume of suspension
n0	0.335		reference efficiency (2 pi-radiation using Re)
Lm	87.44	dB	characteristic sound pressure level (SPL at 1m for 1W @ Re)
Lnom	88.69	dB	nominal sensitivity (SPL at 1m for 1W @ Zn)
rmse Z	2.875		root-mean-square fitting error of driver impedance Z(f)
rmse Hx	2.42		root-mean-square fitting error of transfer function Hx (f)
Sd	814.33	cm <sup>2</sup>	diaphragm area
Xmax	20.5	mm	