

# Thiele/Small Parameters

## 45KM102

Re	1.79	Ohm	electrical voice coil resistance at DC
Krm	0.004	Ohm	WRIGHT inductance model
Erm	0.84		WRIGHT inductance model
Kxm	0.0173	Ohm	WRIGHT inductance model
Exm	0.755		WRIGHT inductance model
Cmes	1462.145	µF	electrical capacitance representing moving mass
Lces	19.4	mH	electrical inductance representing driver compliance
Res	63.455	Ohm	resistance due to mechanical losses
fs	29.85	Hz	driver resonance frequency
Mms voice coil	128.5275	g	mechanical mass of driver diaphragm assembly including air load and
Mmd	121.4495	g	mechanical mass of voice coil and diaphragm without air load
Rms	1.3855	kg/s	mechanical resistance of total-driver losses
Cms	0.221	mm/N	mechanical compliance of driver suspension
Kms	4.53	N/mm	mechanical stiffness of driver suspension
Bl	9.3755	Tm	force factor (Bl product)
Lambda	0.018		suspension creep factor
Qtp	0.5625		total Q-factor considering all losses
Qms	17.4225		mechanical Q-factor of driver in free air considering Rms only
Qes	0.4915		electrical Q-factor of driver in free air considering Re only
Qts	0.478		total Q-factor considering Re and Rms only
Vas	36.05905	l	equivalent air volume of suspension
n0	0.188	%	reference efficiency (2 pi-radiation using Re)
Lm	84.95	dB	characteristic sound pressure level (SPL at 1m for 1W @ Re)
Ln0m	85.43	dB	nominal sensitivity (SPL at 1m for 1W @ Zn)
rmse Z	2.585	%	root-mean-square fitting error of driver impedance Z(f)
rmse Hx	1.855	%	root-mean-square fitting error of transfer function Hx (f)
Sd	339.79	cm <sup>2</sup>	diaphragm area
Xmax	10.3	mm	