

## ***Thiele/Small Low Frequency Driver Parameters And Definitions***

<b>Driver Parameters</b>	<b>Description</b>	<b>Units</b>
<b>Fs</b>	Resonance frequency of driver in free-air	hertz ( Hz )
<b>Vas</b>	Volume of air having same acoustic compliance as driver suspension	liters ( Liter )
<b>Qts</b>	Total Q of driver at <i>Fs</i> including all driver loss mechanisms	--
<b>Qes</b>	Q of driver at <i>Fs</i> considering electrical losses only	--
<b>Qms</b>	Q of driver at <i>Fs</i> considering mechanical losses only	--
<b>Effi</b>	Reference efficiency (half-space acoustic load)	percent ( % )
<b>Re</b>	DC resistance of driver voice coil	ohms ( $\Omega$ )
<b>Pemax</b>	Thermally-limited maximum electrical input power	watts ( W )
<b>Sd</b>	Effective projected surface area of driver diaphragm	square centimeters ( $\text{cm}^2$ )
<b>Xmax</b>	Peak linear displacement of driver diaphragm (Half cycle)	millimeters ( mm )
<b>Vd</b>	Peak linear displacement volume of driver diaphragm	cubic centimeters ( $\text{cm}^3$ )
<b>Le</b>	Voice coil inductance	milli henry ( mH )
 <b>Box Parameters</b>		
<b>Fc</b>	Resonance frequency of closed-box system	hertz ( Hz )
<b>Fb</b>	Resonance frequency of vented-box system (Helmholtz frequency)	hertz ( Hz )
<b>Vb</b>	Net internal volume of enclosure	liters ( Liter )
<b>Qa</b>	Q of enclosure at <i>Fc</i> considering fabric material absorption losses	--
<b>Qb</b>	Total Q of enclosure at <i>Fb</i> considering from all enclosure and vent losses	--
 <b>Passive Radiator Parameters</b>		
<b>Fp</b>	Resonance frequency of passive radiator in free-air	hertz ( Hz )
<b>Vap</b>	Volume of air having same acoustic compliance as passive radiator	liters ( Liter )
<b>Qmp</b>	Q of driver at <i>Fp</i> considering mechanical losses of passive radiator	--
 <b>Vent Parameters</b>		
<b>Dv</b>	Diameter of vent of circular vent	millimeters ( mm )
<b>Wv</b>	Vent width of rectangular vent	millimeters ( mm )
<b>Hv</b>	Vent height of rectangular vent	millimeters ( mm )
<b>Lv</b>	Actual length of vent	millimeters ( mm )
<b>Sv</b>	Total vent area	square centimeters ( $\text{cm}^2$ )