

Definitions of Audio Terms

Here are some definitions of variables commonly found in audio related equations.

A	Attenuation, loss of db
B	Magnetic flux density in gap
Bl	Electro-magnetic force factor
BL	Driver motor strength
c	Propagation velocity of sound at STP, approx. 342 m/s
Cab	Acoustic compliance of air in the enclosure
Cas	Acoustical equivalent of Cms
Cmes	The electrical capacitive equivalent of Mms
Cms	The driver's mechanical compliance (reciprocal of stiffness)
D	Effective diameter of driver
F3	-3 dB cutoff frequency
Fb	Enclosure resonance (usually for reflex systems)
Fc	System resonance (usually for sealed box systems)
Fs	Driver free air resonance. This is the point at which driver impedance is maximum
l	Length of wire immersed in magnetic field
Lces	The electrical inductive equivalent of Cms
Le	Driver inductance (voice coil, mainly)
Levc	Driver voice coil inductance
Mas	Acoustical equivalent of Mms
Mms	The driver's effective mechanical mass (including air load)
n0	The reference efficiency of the system
p	Density of air at STP 1.18 kg/m ³ (rho)
Pa	Acoustical power
Pe	Electrical power
Q	Ratio of reactance to resistance (series circuit), or resistance to reactance (parallel circuit)
Qa	The system's Q at Fb, due to absorption losses
Qec	The system's Q at resonance (Fc), due to electrical losses
Qes	The driver's Q at resonance (Fs), due to electrical losses
Ql	The system's Q at Fb, due to leakage losses
Qmc	The system's Q at resonance (Fc), due to mechanical losses
Qms	The driver's Q at resonance (Fs), due to mechanical losses

Qp	The system's Q at Fb, due to port losses (turbulence, viscosity, etc.)
Qtc	The system's Q at resonance (Fc), due to all losses
Qts	The driver's Q at resonance (Fs), due to all losses
Ras	Acoustical equivalent of Rms
Re	Driver DC resistance (voice coil, mainly)
Revc	DC resistance of the voice coil only
Res	The electrical resistive equivalent of Rms
Rg	Amplifier source resistance (includes leads, crossover, etc.)
Rms	The driver's mechanical losses
SAF	Spouse Acceptance Factor
Sd	Effective piston radiating (surface) area of driver
Vab	The volume of air having the same acoustic compliance as the enclosures
Vas	The volume of air having the same acoustic compliance as the driver suspension: Cms
Vb	Net internal volume of enclosure
Vd	Maximum linear volume of displacement of the driver (product of Sd times Xmax)
Xmax	Maximum peak linear excursion of driver
Z	Total driver impedance

© 1996-2017 Michael LaLena
All rights reserved

