

# Nomenclature

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k-coupling coefficient

L-self inductance

M-mutual inductance

P-output power

$\omega$ -angular frequency

$\rho$ -resistivity

$l$ -length of the coil

R-resistance

$\mu_0$ -permeability of air

$\mu_r$ -relative permeability of material

$\mathbf{dB}$ -magnetic induction component

$\delta$ -skin depth

$R_L$ -load resistance

$V_{DC}$ -DC voltage

$I_{R,pk}$ -receiving end peak voltage

$I_{S,pk}$ -sending end peak voltage

$L_{Helix}$ -helix coil self-inductance

$L_{spiral}$ -spiral coil self-inductance

$\emptyset$ -fill factor

N-number of turns

$D_{max}$ -maximum diameter of coil

$D_{min}$ -minimum diameter of coil

$R_0$  – Ohmic resistance

$R_a$  – Equivalent radiation resistance

Q – Quality factor,

$\sigma$  – Conductivity of the wire,

$\beta$  – Filling rate,

a – Radius of wire

w – Angular frequency

$d_o$  - Outer most length

$d_i$  - Inner most length

$d_{avg}$  - Average length