Variable Key

E	Electric Field Intensity
D	Electric Flux Density (Electric Displacement)
H	Magnetic Field Intensity
B	Magnetic Flux Density
J	Current Density
φ_v	Volume Charge Density
c	Free Space Velocity

ϵ	Permittivity of Medium
ϵ_0	Free Space Permittivity Constant
ϵ_r	Relative Permittivity of Medium

$\epsilon = \epsilon_0\epsilon_r$

μ	Permiability
μ_0	Free Space Permiability Constant
μ_r	Relative Permittivity of Medium (1 for most materials)

$\mu = \mu_0\mu_r$

x_e	Electric Susceptibility
$\vec{P}$	Electric Polarization Vector
x_m	Magnetic Susceptibility
$\vec{M}$	Magnetic Polarization Vector

$\epsilon_r = \frac{\epsilon}{\epsilon_0} = 1 + x_e$
$\mu_r = \frac{\mu}{\mu_0} = 1 + x_m$

Constitutive Relations
$\vec{B} = \epsilon\vec{E}$
$\vec{D} = \mu\vec{H}$

Current Density = Conduction Current Density+ Convection Current Density
Conduction Current Density: $\vec{J} = \sigma\vec{E}$
Convection Current Density: $\vec{J} = \varphi_v\vec{v}$

σ	Conductivity
$\vec{v}$	Velocity of Charge
V	Electric Potential
Q	Charge
q_{ev}	Electric Current Density

Poisson: $\nabla^2 V = \frac{\varphi_v}{\epsilon}$
LaPlace: $\nabla^2 V = 0$
Charge Conservation: $\nabla \cdot \vec{J} = -\frac{d\varphi_v}{dt}$

Boundary Conditions

$\gamma = \alpha + j\beta$

α	Attenuation Constant
β	Phase Constant
γ	Propogation Constant

$k = \frac{2\pi}{\lambda} = \frac{\omega}{v_p}$

η	Intrinsic Impedance
ω	Frequency
ρ	Density
λ	Wavelength
E^+	Electric Field in +z direction
E^-	Electric Field $-$z direction
E_0^+	Electric Field @ z = 0 of Incident Wave
e	Euler's Constant
δ	Skin Depth of a Conductor
v_p	Phase Velocity