

ประกาศตัวแปร

A	area [m^2]
B	magnetic flux density (Wb/m^2)
C_p	specific heat capacity [J/kgK]
D	electric flux density (C/m^2)
E	electric field intensity [V/m]
f	frequency of incident wave [Hz]
H	magnetic field intensity [A/m]
J	current density [A/m^2]
L_x	the length of wave guide in x-direction [m]
Z_I	intrinsic impedance [Ω]
Z_H	wave impedance [Ω]
P	microwave power level [W]
p	pressure [Pa]
Q	local electromagnetic heat generation term [W/m^3]
q	heat flux [W/m^2], electric charge density [C/m^3]
R	universal gas constant [$\text{J}/\text{mol}/\text{K}$]
T	temperature [$^\circ\text{C}$]
$\tan \delta$	loss tangent coefficient [-]
t	time [s]

Greek letters

ρ	density [kg/m^3]
α	thermal diffusivity [m^2/s]
β	coefficient of thermal expansion [$1/\text{K}$]
μ	magnetic permeability [H/m]
v	velocity of microwave [m/s]

λ_0	wavelength in free space [m]
λ_g	wavelength in waveguide [m]
λ_{mg}	wavelength in dielectric materials [m]
ω	angular frequency [rad/s]
σ	electric conductivity [S/m]
ε	complex permittivity [F/m]
ε'	permittivity or dielectric constant [-]
ε''	dielectric loss factor [-]
λ, λ_{eff}	effective thermal conductivity [W/mK]

Subscripts

0	free space
<i>in</i>	input
<i>n</i>	component of normal direction
<i>r</i>	relative
<i>t</i>	component of tangent direction
<i>x, y, z</i>	coordinates