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List of symbols and abbreviations

RA	Reconfigurable Antenna
MIMO	Multiple Input Multiple Output
RF-MEMS	Radio Frequency Microelectromechanical Systems
FRA	Frequency Reconfigurable Antenna
VNA	Vector Network Analyzer
RMA	Rectangular Microstrip Patch Antenna
TLM	Transmission Line Model
ω	Angular frequency
ε_{eff}	Effective permittivity
ε_r	Relative permittivity
ε_r'	Real part of complex permittivity
ε_r''	Imaginary part of complex permittivity
$tan\,\delta_e$	Dielectric loss tangent
c	Velocity of light in free space
λ_0	Free space wavelength
λ_g	Guided wavelength
Ω	Ohm
θ	Theta
℃	Degree Celsius
f_r	Resonant frequency
S_{11}	Scattering parameter (reflection)
NRE	Non-radiating edge
XRD	X-ray Diffraction
TEM	Transmission Electron Microscope
SEM	Scanning Electron Microscopy

FF	Ferrofluid
ISPW	Isopropanol deionized water solution
N	Normal
E	Electric field vector
H	Magnetic field vector
GHz	Giga Hertz
MHz	Mega Hertz
mm	millimeter
nm	nano meter
A	Ampere
dB	Decibel
dBi	Decibels relative to isotropic
Wt.	Weight
rf	Radio frequency
dc	Direct current
nH	Nanohenry
pF	Picofarad