

## Acronyms and Abbreviations

<b>AACS</b>	attitude and articulation control subsystem
<b>ABET, Inc.</b>	Accreditation Board for Engineering and Technology
<b>ACORDE</b>	Advanced Communications Research and Development, S.A. (Santander, Spain)
<b>AG</b>	auxiliary generator
<b>AM</b>	amplitude modulation
<b>BMDO</b>	U. S. Ballistic Missile Defense Organization
<b>CMOS</b>	complementary metal oxide semiconductor
<b>COA</b>	coupled-oscillator array
<b>CPG</b>	central pattern generator
<b>CPM</b>	constant-phase modulation
<b>CTTC</b>	Centre Tecnologic de Telecomunicacions de Catalunya (Barcelona, Spain)
<b>dBc</b>	decibels relative to the carrier
<b>dBm</b>	decibels referenced to milliwatts

<b>dc, DC</b>	direct current
<b>DC bias</b>	bias voltage associated with a direct-current system
<b>d.e.</b>	differential equation
<b>deg</b>	degree
<b>E-plane</b>	plane containing the electric field intensity vector
<b>Eq.</b>	Equation
<b>EuCAP</b>	European Conference on Antennas and Propagation
<b>FET</b>	field effect transistor
<b>FFT</b>	fast Fourier transform
<b>GCD</b>	Global Communications Devices (North Andover, Massachusetts)
<b>GHz</b>	gigahertz
<b>GMSK</b>	Gaussian minimum-shift keying
<b>GSM</b>	Global System for Mobile Communications
<b>GTRI</b>	Georgia Tech Research Institute
<b>H-plane</b>	plane containing the magnetic field intensity vector
<b>HSOM</b>	harmonic self-oscillating mixer
<b>IEE</b>	Institution of Electrical Engineers
<b>IEEE</b>	Institute of Electrical and Electronics Engineers
<b>IET</b>	Institution of Engineering and Technology
<b>IRE</b>	Institute of Radio Engineers
<b>IF</b>	intermediate frequency
<b>ILR</b>	inverse locking range

<b>JPL</b>	Jet Propulsion Laboratory
<b>L-band</b>	frequency range between 390 and 1550 MHz
<b>LCP</b>	liquid-crystal polymers
<b>LMDS</b>	local multipoint distribution service
<b>LMS</b>	least mean square
<b>MESFET</b>	metal semiconductor field-effect transistor
<b>MHz</b>	megahertz
<b>MMIC</b>	monolithic microwave integrated circuit
<b>mr</b>	milliradian
<b>Ms<sup>-1</sup></b>	mega inverse seconds
<b>NARRA</b>	Novel Architectures for Reconfigurable Reflectarrays and Phased Array Antennas
<b>NASA</b>	National Aeronautics and Space Administration
<b>nH</b>	nanoHenry
<b>ns</b>	nanosecond
<b>pF</b>	picofarad
<b>pHEMT</b>	pseudomorphic high electron mobility transistor
<b>PLL</b>	phase-locked loop
<b>PM</b>	phase modulation
<b>R.A.C.</b>	Radio Antenna Communications (Milan, Italy)
<b>Ref.</b>	reference
<b>RF</b>	radio frequency
<b>RFCSET</b>	RF/Microwave Communication Subsystems for Emerging Wireless Technologies
<b>RFID</b>	radio-frequency identification

<b>RLC</b>	resistance, inductance, capacitance
<b>RoM</b>	reduced order model
<b>S-band</b>	RF frequencies 1550–5200 MHz
<b>SIW</b>	substrate integrated waveguide
<b>SOM</b>	self-oscillating mixer
<b>SWAP</b>	(Marie Curie Industry-Academia Pathways and Partnerships project) Symbiotic Wireless Autonomous Powered system
<b>USNC/URSI</b>	U.S. National Committee (USNC) of the Union Radio Scientifique Internationale
<b>UWB</b>	ultra-wideband
<b>V</b>	volt
<b>VCO</b>	voltage- controlled oscillator
<b>VHF</b>	very high frequency
<b>VNA</b>	vector network analyzer
<b>VSA</b>	vector signal analyzer