
List of Symbols and Abbreviations

ACC	Autonomous Cruise Control
ADC	Analog-to-digital Converter
BFACP	Balanced-fed Aperture-coupled Patch
BW	Bandwidth
CMOS	Complementary Metal–oxide–semiconductor
DAC	Digital-to-Analog Converter
DSP	Digital Signal Processing
EIRP	Effective Isotropic Radiated Power
EM	Electromagnetic
EVM	Error Vector Magnitude
FCC	Federal Communications Commission
FDMA	Frequency Domain Multiple Access
FM	Frequency Modulated
FSK	Frequency-shift Keying
GPRS	General Packet Radio Service
GSGSG	Ground-signal-ground-signal-ground
GSM	Global System for Mobile Communications
GSSG	Ground-signal-signal-ground
HDTV	High Definition Television
IC	Integrated Circuit
IF	Intermediate Frequency
IR	Infrared Radiation
ISM	Industrial, Scientific and Medical
LAN	Local Area Network

LMDS	Local Multipoint Distribution Service
LNA	Low Noise Amplifier
LTE	Long Term Evolution
LO	Local Oscillator
LOS	Line-of-sight
LRM	Load-reflect-match
MAN	Metropolitan Area Network
MOSFET	Metal-oxide-semiconductor Field-effect Transistor
MIMO	Multiple-input and Multiple-output
NLOS	Non-line-of-sight
NF	Noise Figure
OFDM	Orthogonal Frequency-division Multiplexing
P_{1dB}	1dB Compression Point
PA	Power Amplifier
PAE	Power-added Efficiency
PAN	Personal Area Network
PC	Personal Computer
PCB	Printed Circuit Board
PLL	Phase-locked Loop
P_{max}	Maximum Power
PVT	Process, Voltage and Temperature
QPSK	Quadrature Phase Shift Keying
RF	Radio Frequency
RMS	Root Mean Square
SIP	System in Package
SISO	Single-input and Single-output
SNR	Signal-to-noise Ratio
SOLT	Short-open-load-through
SPDT	Single Pole Double Throw
TDMA	Time Domain Multiple Access
UMTS	Universal Mobile Telecommunications System
UWB	Ultra-wideband
VCO	Voltage Controlled Oscillator
VGA	Variable-gain Amplifier
WAN	Wide Area Network
WCDMA	Wideband Code Division Multiple Access
WPAN	Wireless Personal Area Network

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