University Electrical Engineering

Glossary · every term in the course, A–Z

English

absorption
/əbˈsɔːpʃn/
AC circuit analysis

active region

ADC
/ˌeɪ diːˈsiː/
adder
/ˈædə/
air gap

aliasing
/ˈeɪlɪəsɪŋ/
ammeter
/ˈæmiːtə/
ammeter
/ˈæmiːtə/
ampere
/ˈæmpeə/
Ampere’s law

Ampère’s law
/ˈæmpeəz lɔː/
amplitude modulation

antennas

anti-alias filter

anti-windup

argument
/ˈɑːgjuːmənt/
armature

assembly

asymptote
/ˈæsɪmptəʊt/

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English

at the clock edge

auxiliary equation
/ɔːkˈsɪlɪəri ɪˈkweɪʒn/

back-EMF

bandwidth
/ˈbændwɪdθ/

base value

baud rate

bias point

BIBO stability

BIBO stability

bilinear transform

binary
/ˈbaɪnəri/

Biot-Savart law

Biot–Savart law
/ˈbɪɒt ˈsævɑːt lɔː/

bipolar junction transistor

block diagram

Bode plot

Boolean algebra
/ˈbuːlɪən ˈældʒɪbrə/

boost

bounce diagram

boundary conditions

breakaway point

breakdown torque

bridge rectifier
/brɪdʒ ˈrektɪfaɪə/

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English

buck

bus
/bʌs/
butterfly

capacitance
/kə'pæsɪtəns/
capacitor
/kə'pæsɪtə/
Carson's rule

cascade

causality

channel capacity

characteristic equation
/ˌkærɪktə'rɪstɪk ɪ'kweɪʒn/
characteristic impedance

charge
/tʃɑːdʒ/
clock
/klɒk/
clock edge
/klɒk edʒ/
combinational logic
/ˌkɒmbɪ'neɪʃənl 'lɒdʒɪk/
communication systems

commutator
/'kɒmjuːteɪtə/
complex number
/'kɒmpleks 'nʌmbə/
complex power

conductance

conserved
/kən'sɜːvd/
constant-drop model

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English

constellation

continuous conduction

control systems

controllability

convolution

copper loss

core loss

corner frequency

coulomb
/ˈkuːlɒm/

coupling capacitor

critically damped

curl
/kɜːl/

current
/ˈkʌrənt/

current divider
/ˈkʌrənt dɪˈvaɪdə/

cutoff

cutoff frequency
/ˈkʌtɒf ˈfriːkwənsi/

DAC
/ˌdiː eɪ ˈsiː/

damping
/ˈdæmpɪŋ/

damping ratio

De Morgan's theorem
/də ˈmɔːgənz ˈθɪərəm/

debounce

decibel

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English

decimation

decoder
/dɪˈkəʊdə/
derivative
/dɪˈrɪvətɪv/
derivative
/dɪˈrɪvətɪv/
determinant
/dɪˈtɜːmɪnənt/
DFT

difference equation

digital logic design
/ˈdɪdʒɪtl ˈlɒdʒɪk dɪˈzaɪn/
digital signal processing

dipole
/ˈdaɪpəʊl/
direct-current circuit analysis
/daɪˈrekt ˈkʌrənt ˈsɜːkɪt əˈnæləsɪs/
displacement current
/dɪˈspleɪsmənt ˈkʌrənt/
divergence
/daɪˈvɜːdʒəns/
dominant pole

don’t-care
/dəʊnt keə/
doping

DTFT

duty cycle

eddy current

eigenvalue
/ˈaɪgənvæljuː/
electrical machines and power systems

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English

electromagnetics

electronics I

encirclement

energy
/ˈenədʒi/
entropy
/ˈentrəpi/
envelope detector

Euler's identity
/ˈɔɪləz aɪˈdentɪti/
excitation

excitation table
/eksɪˈteɪʃn ˈteɪbl/
expectation
/ekspɪkˈteɪʃn/
exponential model
/ˌekspəˈnenʃl ˈmɒdl/
farad
/ˈfæræd/
fault current

feedback
/ˈfiːdbæk/
fetch-decode-execute cycle

fetch–decode–execute cycle

FFT

field weakening

filter
/ˈfɪltə/
filter capacitor

finite state machine
/ˈfaɪnaɪt steɪt məˈʃiːn/

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FIR

flip-flop
/flɪp flɒp/
flux
/flʌks/
flux
/flʌks/
Fourier series
/ˈfɔːrɪə ˈsɪəriːz/
Fourier transform

frequency deviation

frequency response

Friis equation

full adder
/fʊl ˈædə/
fundamental
/ˌfʌndəˈmentl/
gain crossover

gain margin

gain-bandwidth product
/geɪn ˈbændwɪdθ ˈprɒdʌkt/
Gauss's law
/ˈgaʊsɪz lɔː/
golden rule
/ˈgəʊldn ruːl/
good conductor

GPIO

gradient
/ˈgreɪdɪənt/
guide wavelength

half adder
/hɑːf ˈædə/
half-wave rectifier

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English

Hamming code

Hamming window

hardware description language
/ˈhɑːdweə dɪˈskrɪpʃn ˈlæŋgwɪdʒ/

harmonic
/hɑːˈmɒnɪk/

hazard
/ˈhæzəd/

henry
/ˈhenri/

hexadecimal
/ˌheksəˈdesɪml/

homogeneous
/ˌhɒməˈdʒiːniəs/

hysteresis

I2C

ideal model

ideal op-amp

ideal operational amplifier
/aɪˈdɪəl ˌɒpəˈreɪʃənl ˈæmplɪfaɪə/

IIR

impedance
/ɪmˈpiːdəns/

impulse response

impulse response

inductance
/ɪnˈdʌktəns/

inductor
/ɪnˈdʌktə/

infinite bus

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English

initial condition
/ɪˈnɪʃl kənˈdɪʃn/
instantaneous frequency

integral
/ˈɪntɪgrəl/
interpolation
/ɪnˌtɜːpəˈleɪʃn/
interrupt
/ˈɪntərʌpt/
interrupt service routine
/ˈɪntərʌpt ˈsɜːvɪs ruːˈtiːn/
intrinsic impedance

intrinsic impedance

inverting amplifier
/ɪnˈvɜːtɪŋ ˈæmplɪfaɪə/
joule
/dʒuːl/
Karnaugh map
/ˈkɑːnɔː mæp/
kilowatt-hour
/ˈkɪləwɒt ˈaʊə/
Kirchhoff's current law
/ˈkɜːkhɒfs ˈkʌrənt lɔː/
Kirchhoff's voltage law
/ˈkɜːkhɒfs ˈvəʊltɪdʒ lɔː/
Laplace transform

latch
/lætʃ/
lead compensator

leakage

linear phase

linear system
/ˈlɪnɪə ˈsɪstəm/
linear time-invariant

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English

linearity
/lɪˈnɪərɪti/
linearization
/ˌlɪnɪəraɪˈzeɪʃn/
loop
/luːp/
loop gain

Lorentz force

lossy medium

LSB

magnetic flux
/mægˈnetɪk flʌks/
magnetomotive force

marginal stability

mathematical methods
/ˌmæθɪˈmætɪkl ˈmeθədz/
matrix inverse
/ˈmeɪtrɪks ɪnˈvɜːs/
maximum power transfer
/ˈmæksɪməm ˈpaʊə ˈtrænsfɜː/
Mealy machine
/ˈmiːli məˈʃiːn/
measure
/ˈmeʒə/
memory
/ˈmeməri/
memory-mapped I/O

memory-mapped I/O

memory-mapped register

mesh analysis
/meʃ əˈnæləsɪs/
mesh current
/meʃ ˈkʌrənt/

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English

microcontroller

microprocessors and
embedded systems

Miller capacitance

modelling
/ˈmɒdəlɪŋ/
modulation index

modulus
/ˈmɒdjʊləs/
Moore machine
/mʊə məˈʃiːn/
MOSFET

multimeter
/ˌmʌltɪˈmiːtə/
multiplexer
/ˈmʌltɪpleksə/
natural frequency
/ˈnætʃərəl ˈfriːkwənsi/
natural frequency
/ˈnætʃərəl ˈfriːkwənsi/
natural response
/ˈnætʃərəl rɪˈspɒns/
negative feedback
/ˈnegətɪv ˈfiːdbæk/
nodal analysis
/ˈnəʊdl əˈnæləsɪs/
node
/nəʊd/
noise figure

non-inverting amplifier
/nɒn ɪnˈvɜːtɪŋ ˈæmplɪfaɪə/
Norton's theorem
/ˈnɔːtnz ˈθɪərəm/
Nyquist criterion

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English

Nyquist criterion

ohm
/əʊm/
Ohm's law
/əʊmz lɔː/
open-circuit test

open-circuit voltage

operating point

operational amplifier
/ˌɒpəˈreɪʃənl ˈæmplɪfaɪə/
ordinary differential equation
/ˈɔːdɪnəri ˌdɪfəˈrenʃl ɪˈkweɪʒn/
orthogonality
/ˌɔːθəgəˈnælɪti/
overdamped

overflow
/ˌəʊvəˈfləʊ/
overshoot
/ˌəʊvəˈʃuːt/
parallel
/ˈpærəlel/
partial fraction
/ˈpɑːʃl ˈfrækʃn/
particular
/pəˈtɪkjʊlə/
passive sign convention
/ˈpæsɪv saɪn kənˈvenʃn/
peak inverse voltage

peak time

per-unit

phase
/feɪz/
phase crossover

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phase margin

phasor
/ˈfeɪzɔː/

PID controller

piecewise-linear model

plane wave

plant
/plænt/

pn junction

polarisation
/ˌpəʊləraɪˈzeɪʃn/

pole
/pəʊl/

pole placement

poles and zeros

polling

polyphase

potential
/pəˈtenʃl/

power
/ˈpaʊə/

power angle

power factor

power factor correction

power flow

power limit

power-factor correction

Poynting vector
/ˈpɔɪntɪŋ ˈvektə/

prescaler

English

prewarp

probability distribution
/ˌprɒbəˈbɪlɪti ˌdɪstrɪˈbjuːʃn/
processing gain

program counter
/ˈprəʊgræm ˈkaʊntə/
proportional
/prəˈpɔːʃənl/
Q factor

quantisation
/ˌkwɒntaɪˈzeɪʃn/
raised-cosine

random variable
/ˈrændəm ˈveərɪəbl/
range
/reɪndʒ/
reactive compensation

rectangular pulse
/rekˈtæŋgjʊlə pʌls/
reference node
/ˈrefrəns nəʊd/
register
/ˈredʒɪstə/
reluctance

resistor
/rɪˈzɪstə/
resolution
/ˌrezəˈluːʃn/
resonance
/ˈrezənəns/
ripple
/ˈrɪpl/
ripple counter
/ˈrɪpl ˈkaʊntə/
rise time

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root locus

rotating field

Routh array

saturation
/ˌsætʃəˈreɪʃn/
saturation region

sequential logic
/siːˈkwenʃl ˈlɒdʒɪk/
series
/ˈsɪəriːz/
series motor

settling time

shift register
/ʃɪft ˈredʒɪstə/
short-circuit test

shunt motor

sideband

signal
/ˈsɪgnl/
signals and systems

simulation
/ˌsɪmjʊˈleɪʃn/
singular
/ˈsɪŋgjʊlə/
skin depth

slack bus

slip

small-signal

source transformation
/sɔːs trænsfɔːˈmeɪʃn/

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English

SPI

square-law model

squirrel-cage

standard deviation
/ˈstændəd ˌdiːvɪˈeɪʃn/
state diagram
/steɪt ˈdaɪəgræm/
state space

state variable

static margin

steady-state error

step response
/step rɪˈspɒns/
summing amplifier

superposition
/ˌsuːpəpəˈzɪʃn/
synchronous counter
/ˈsɪŋkrənəs ˈkaʊntə/
synchronous machine

synchronous rectification

synchronous speed

synthesis
/ˈsɪnθəsɪs/
synthesizable
/ˈsɪnθəsaɪzəbl/
system
/ˈsɪstəm/
system function

system type

telegrapher equations

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testbench
/ˈtestbentʃ/
Thévenin's theorem

three-phase

threshold
/ˈθreʃəʊld/
time constant
/taɪm ˈkɒnstənt/
time invariance

time-bandwidth trade-off

timer

time–bandwidth trade-off

toggle
/ˈtɒgl/
transfer function

transformer
/trænsˈfɔːmə/
transient response
/ˈtrænsɪənt rɪˈspɒns/
transimpedance amplifier

transition matrix
/trænˈsɪʃn ˈmeɪtrɪks/
twiddle factor

two's complement
/tuːz ˈkɒmplɪmənt/
two-port

two-port network

UART

underdamped

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English

unit circle
/ˈjuːnɪt ˈsɜːkl/
variance
/ˈveərɪəns/
velocity error constant

virtual ground

virtual short
/ˈvɜːtʃuːəl ʃɔːt/
volt
/vəʊlt/
volt-second balance

voltage
/ˈvəʊltɪdʒ/
voltage divider
/ˈvəʊltɪdʒ dɪˈvaɪdə/
voltage divider bias

voltage follower

voltage gain

watchdog

watt
/wɒt/
waveguide wavelength

wound rotor

z-transform

zener diode

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