ISSCC GLOSSARY

1

1P1M	1-Polysilicon layer 1-Metal layer
1T1C	1-Transistor 1-Capacitor

3

3D	3-Dimensional
3G	Third-Generation (Wireless)
3T	3-Transistor

6

6T	6-Transistor

8

8T	8-Transistor

ΔΣ

ΔΣ	Delta-Sigma
ΔΣM	Delta-Sigma Modulator

ΣΔ

ΣΔ	ΔΣ is preferred.
ΣΔM	ΔΣM is preferred.

A

a-Si	Amorphous Silicon
AC	Alternating Current
A/D	Analog-to-Digital Converter
AAC	Advanced Audio Coding
ACI	Adjacent-Channel Interface
ACLR	Adjacent-Channel Leakage Power Ratio
ACPR	Adjacent-Channel Power Ratio
ADC	Analog-to-Digital Converter
ADDLL	All-Digital DLL
ADPLL	All-Digital PLL
ADSL	Asynchronous Digital Subscriber line
ADU	Analog-to-Digital Unit
AES	Advanced Encryption Standard
AFC	Automatic Frequency Control
AFE	Analog Front End
AGC	Automatic Gain Control
AGU	Address-Generation Unit
AIP	Artificial-Intelligent Partner
ALU	Arithmetic Logic Unit
AM	Amplitude Modulation
AMLCD	Active-Matrix LCD
AMOLED	Active-Matrix OLED
AMP	Asymmetric Multi-Processing
AMPS	Advanced Mobile-Phone Service
AMS	Analog Mixed-Signal {System}
APD	Avalanche Photo-Diode
APG	Algorithmic Pattern Generator
APSK	Amplitude Phase-Shift Keying
ARM	Advanced RISC Machine
ASIC	Application-Specific Integrated Circuit
ASK	Amplitude Shift Keying
ASP	Average Selling Price
ASP	Advanced Simple Profile {MPEG-4 Video}
ATA	Advanced Technology Attachment
ATD	Address-Transition Detection
ATE	Automatic Test Equipment
ATM	Asynchronous Transfer Mode
ATSC	Advanced Television Systems Committee
AVC	Audio-Visual CODEC
AVC	Automatic Volume Control {use AGC}
AWG	Arrayed-Waveguide Grating

B

BAW	Bulk Acoustic Wave
BB	Baseband
BBT	Band-to-Band Tunneling
BCD	Bipolar-CMOS-DMOS Process
BCD	Binary-Coded Decimal
BCH	Bose-Chaudhuri-Hocquenghem {a type of error-correcting code}
BD	Blu-ray disc
BER	Bit-Error Rate
BGA	Ball-Grid Array
BGR	Band-Gap Reference
BiCMOS	Bipolar Complementary-MOS
BIOS	Basic Input/Output System
BIST	Built-in Self-Test
BJT	Bipolar Junction Transistor
BL	Bitline
BOM	Bill of Materials
BPF	Bandpass Filter
BPSK	Binary Phase-Shift Keying
B-VOP	Bidirectional-Video Object Planes
BW	Bandwidth

C

C4	Controlled-Collapse Chip Connection
CAD	Computer-Aided Design
CAM	Content-Addressable Memory
CAN	Controller Area Network
CAS	Column-Address Strobe
CCCS	Current-Controlled Current Source
CCD	Charge-coupled Device
CCK	Complementary Code Keying
CCO	Current-Controlled Oscillator
CCVS	Current-Controlled Voltage Source
CDAC	Capacitor DAC
CDMA	Code-Division Multiple Access
CDR	Clock and Data Recovery
CDS	Correlated Double Sampling
CF	Compact Flash
CFA	Color Filter Array
CHE	Channel Hot-Electron (Injection)
CIS	Complex-Instruction-Set Computer
CIS	CMOS Image Sensor
CML	Current-Mode Logic
CMOS	Complementary MOS
CMRR	Common-Mode Rejection Ratio
CMU	Clock Multiplier Unit
CNFET	Carbon Nanotube NFET
CO	Central-Office {hardware}
CODEC	Coder-Decoder
COFDM	Coded FDM
CPE	Customer Premises Equipment
CPU	Central Processing Unit
CPW	CoPlanar Waveguide
CRC	Cyclic Redundancy Check
CSMA	Carrier-Sense Multiple Access
CT	Continuous Time {system}
CUI	Command User Interface
CVD	Chemical Vapor Deposition

D

D/A	Digital-to-Analog Converter
DAB	Digital-Audio Broadcasting
DAC	Digital-to-Analog Converter
dBFS	dB relative to Full Scale
DBS	Direct-Broadcast Satellite
DCC	Duty-Cycle Corrector

DCO	Digitally Controlled Oscillator
DCT	Discrete Cosine Transform
DCVS	Differential Cascode Voltage Switch
DCVS	Digitally-Controlled Voltage Source
DCXO	Digitally Controlled Crystal Oscillator
DDFS	Direct-Digital Frequency Synthesis (or synthesizer)
DDR	Dual Data Rate
DDS	Direct Digital Synthesis
DECT	Digitally Enhanced Cordless Communication
DEM	DEModulator
DEM	Dynamic Element Matching
DEMOS	Depletion MOS
DEMUX	Demultiplexer
DES	Data-Encryption Standard
DEVM	Differential Error Vector Magnitude
DFE	Decision-Feedback Equalizer
DFF	D-type Flip Flop
DFT	Design for Testability
DFT	Discrete Fourier Transform
DfY	Design-for-Yield
DIMM	Dual In-Line Memory Module
DIP	Dual In-line Package
DLL	Delay-Locked Loop
DMA	Direct Memory Access
DMB	Digital Multimedia Broadcasting
DMIPS	Dhrystone Million Instructions Per Second
DMOS	(Double-)Diffused MOS
DNA	Deoxyribonucleic Acid
DNL	Differential Non-Linearity
DNR	Dynamic Range (DR preferred)
DOM	Digital Optical Module
DR	Dynamic Range (see also DNR)
DRAM	Dynamic Random-Access Memory
DRC	Design-Rule Check
DSB	Double Side Band
DSC	Digital Still Camera
DSL	Digital Subscriber Line
DS-OFDM	Direct-Sequence Orthogonal Frequency Division Multiplexing
DSP	Digital Signal Processing
DSSS	Direct-Sequence Spread-Spectrum
DT	Discrete Time
DTL	Diode-Transistor Logic
DTV	Digital Television
DUT	Device Under Test
DVB	Digital-Video Broadcasting
DVB-C	Digital-Video Broadcasting - Cable
DVB-H	Digital-Video Broadcasting - Handhelds
DVB-S	Digital-Video Broadcasting - Satellite
DVB-T	Digital-Video Broadcasting - Terrestrial
DVD	Digital Video Disc
DVS	Dynamic Voltage Scaling
DWA	Data Weighted Averaging
DWDM	Dense-Wavelength-Division Multiplexing
DWMT	Discrete Wavelet Multi-Tone

E

ECC	Error-Correcting Code
ECG	Electro-CardioGram
ECL	Emitter-Coupled Logic
ECP	Emitter-Coupled Pair
EDGE	Enhanced Data rates for Global Evolution
EDR	Enhanced Data Rate
EEG	Electro-EncephaloGram
EEPROM	Electrically Erasable Programmable Read-Only Memory
EFR	Enhanced Full-Rate {GSM}
EIRP	Effective Isotropic Radiated Power

EKG	Electro-CardioGram (see ECG)
EMG	ElectroMyoGram
EMI	Electro Magnetic Interference
ENOB	Effective Number o f Bits
EOT	Electrical Oxide Thickness
EPON	Ethernet-based Passive Optical Network
EPROM	Erasable Programmable Read-Only Memory
ERBW	Effective-Resolution Bandwidth
ESD	ElectroStatic Discharge
EVDO	EVolution Data Optimized (in the context of CDMA)
EVM	Error-Vector Magnitude
EWC	Enhanced Wireless Consortium

F

f_{max}	Unity power gain frequency.
f_s	Sampling frequency
f_t	Transit frequency
FAMOS	Floating-gate Avalanche-injection MOS Transistor
FBAR	Film Bulk Acoustic Resonator
FBDIMM	Fully Buffered DIMM
FCC	Federal Communications Commission (U.S.)
FDM	Frequency-Division Multiplexing
FDMA	Frequency-Division Multiple-Access
FDNR	Frequency-Dependent Negative Resistor
FEC	Forward Error Checking
FeRAM	Ferro-electric Random Access Memory
FET	Field-Effect Transistor
FF	Flip-Flop
FFE	Feed-Forward Equalizer
FFT	Fast Fourier Transform
FIB	Focused Ion Beam
FIFO	First In-First Out
FinFET	A MOSFET with the gate on two sides {acronym describes the physical shape}
FIR	Finite Impulse Response {filter}
FLOPS	Floating-Point Operations Per Second
FLOTOX	Floating-gate Tunnel OXide
FM	Frequency Modulation
FMCW	Frequency Modulated Continuous Wave
FN	Fowler-Nordheim
FO4	Fan-Out of 4
FOM	Figure Of Merit
FPGA	Field-Programmable Gate Array
FPN	Fixed Pattern Noise
FPU	Floating Point Unit
FSG	FluoroSilicate glass {dielectric}
FSG	Fluorine-doped Silicate Glass
FSK	Frequency-Shift Keying
FSM	Finite-State Machine

G

GBW	Gain-BandWidth {product}
GCA	Gain-Controlled Amplifier
GDDR	Graphics Double-Data-Rate
GDfM	Generalized Design-for-Manufacturability
GFSK	Gaussian Frequency-Shift Keying
GFLOPS	Giga Floating-Point Operations Per Second
GIDL	Gate-Induced Drain Leakage
GMSK	Gaussian Minimum-Shift Keying
GOPS	Giga-Operations Per Second
GPRS	General Packet-Radio Service
GPS	Global Positioning System
GSM	Global Standard for Mobile Communication
GUI	Graphical User Interface
GVCO	Gated VCO

H

HBT	Hetero-junction Bipolar Transistor
HBM	Human Body Model
HCI	Host-Controller Interface
HCI	Human-to-Computer Interface
HD	High-Density
HDD	Hard-Disk-Drive
HDL	Hardware-Description Language
HDTV	High-Definition TeleVision
HD2	2nd order Harmonic Distortion
HD3	3rd order Harmonic Distortion
HiFi	High Fidelity
HPF	High-Pass Filter
HSPDA	High-Speed Downlink Packet Access
HT3	Hypertransport 3 (I/O standard)
HTM	Hierarchical Temporal Memory
HV	High Voltage
HVCMOS	High-Voltage Complementary MOS
HVMOS	High-Voltage MOS

I

I/O	Input-Output
I/Q	In Phase and Quadrature
IBOC	In-Band Out-of-Channel
IC	Integrated Circuit
ID	Identification
IF	Intermediate Frequency
IIP2	Input-referred Input 2nd-order Intercept Point
IIP3	Input-referred Input 3rd-order Intercept Point
IIR	Infinite Impulse Response Filter
IMD	Inter-Modulation Distortion
IM2	2nd-order InterModulation distortion
IM3	3rd-order InterModulation distortion
INL	Integral Non-Linearity
InP	Indium Phosphide
IP	Intellectual Property
IPSEC	Internet (Network) Protocol for Security
IR	Image Rejection
IR	InfraRed
ISDB	Integrated Services Digital Broadcasting
ISDB-C	Integrated Services Digital Broadcasting - Cable
ISDB-S	Integrated Services Digital Broadcasting - Satellite
ISDB-T	Integrated Services Digital Broadcasting - Terrestrial
ISFET	Ion-Sensitive Field-Effect Transistor
ISI	Inter-Symbol Interference
ISM	Industrial, Scientific and Medicine Band
ITU-T	International Telecommunications Union

J

JPEG	Joint Photographic Expert Group
JTAG	Joint Test-Automation Group

L

LAGS	Locally-Asynchronous Globally-Synchronous
LAN	Local-Area Network
LBS	Location-Based Services
LCD	Liquid-Crystal Display
LCOS	Liquid-Crystal On Silicon
LDI	LVDS Display Interface
LDCMOS	Laterally Diffused Complementary Metal-Oxide Silicon
LDMOS	Laterally Diffused Metal-Oxide Silicon
LDO	Low Drop-Out {regulator}
LDPC	Low-Density Parity Check
LED	Light-Emitting Diode
LEP	Light-Emitting Polymer
LFCSP	LeadFrame Chip-Scale Package

LFSR	Linear-Feedback Shift Register
LIN	Local Interconnect Network
LMS	Least Mean Square
LNA	Low-Noise Amplifier
LNB	Low-Noise Blockers
LO	Local Oscillator
LPCVD	Low-Pressure Chemical-Vapor Deposition
LPF	Low-Pass Filter
LSB	Least-Significant Bit
LSI	Large-Scale Integration
LTPS	Low-Temperature-Poly Silicon
LV	Low Voltage
LVDS	Low-Voltage Differential Signaling
LVS	Layout Verification to Schematic

M

MAC	Media-Access Controller
MAC	Mutiply-Accumulate
MASH	Multi-stAge noise SHaping
MBOA	Multi-Band OFDM Alliance
MB-OFDM	Multi-Band OFDM
MCM	Multi-Chip Module
MCU	MicroController Unit
MDAC	Multiplying DAC
MEMS	Micro-Electro-Mechanical System
MER	Modulation Error Ratio
MfD	Manufacturing-for-Design
microSD	micro Secure Digital
MICS	Medical Implant Communication Band
MIM	Metal-Insulator-Metal
MIMO	Multipl- Input, Multiple-Output
MIPI	Mobile Industry Processor Interface
MIPS	Million Instructions Per Second
ML	Matchline
MLC	Multi-Level Cell
MLSD	Maximum-Likelihood-Sequence Detection
MLSE	Maximum-Likelihood-Sequence Estimation
MMAC	Mega Mutliply-Accumulate
MMIC	Monolithic Microwave Integrated Circuit
MODEM	Modulator-Demodulator
MOS	Metal-Oxide-Semiconductor (Silicon)
MOSFET	Metal-Oxide-Semiconductor FET
MOST	MOS Transistor
MOST	Media-Oriented Systems Transport
MP	Multi-Processor
MP3	MPeg-1 audio layer 3 (lossy compression algorithm)
MPEG	Motion-Picture Expert Group
Mpps	Million packets per second {VoIP}
MSB	Most Significant Bit
MRAM	Magnetic Random-Access Memory
MRAM	Magnetoresistive Random-Access Memory
MRC	Maximum-Ratio Combining
MSB	Most-Significant Bit
MTJ	Magnetic Tunnel Junction
MTPR	Multi-Tone Power Ratio
MUX	Multiplexer

N

NBTI	Negative-Bias Temperature Instability
NEF	Noise Efficiency Factor
NEM	Nano-Electro-Mechanical system
NF	Noise Figure
NMOS	N-channel MOS
NMOST	NMOS Transistor
NoC	Network on (a) Chip
NPN	N-type-P-type-N-type bipolar (transistor)
NRTZ	Non Return-To-Zero (see also NRZ)
NRZ	Non-Retun- to-Zero (see also NRTZ)