

Acronyms

AC	Autoclave	COB	Chip on Board
ACA	Anisotropic Conductive Adhesive	COF	Chip on Flex
ACES	Applied Computational Electromagnetics Society	COGS	Cost of Goods Sold
AEM	Aircraft Equipment Monitor	COTS	Commercial Off The Shelf
AF	Acceleration Factor	Cpk	Process Capability Index
AIAA	American Institute of Aeronautics and Astronautics	CPLD	Complex Programmable Logic Device
ALT	Accelerated Life Test	CR	Contact Resistance
AMLCD	Active Matrix Liquid Crystal Display	CRT	Cathode Ray Tube
ANSI	American National Standards Institute	CSAM	C-mode Scanning Acoustic Microscopy
AOQ	Average Outgoing Quality	CSP	Chip Scale Package
AOQL	Actual Outgoing Quality Level	CTE	Coefficient of Thermal Expansion
APQ	Accelerated Product Qualification	DBC	Direct Bond Copper
ARAC	Aviation Rulemaking Advisory Committee	DBGGA	Dimple Ball Grid Array
ARP	Aerospace Recommended Practice	DBS	Direct Broadcast Satellite
ASIC	Application Specific Integrated Circuit	DBTF	Design-Build-Test-Fix
ASSC	Application Specific Standard Component	DFR™	Design for Reliability
ASSP	Application Specific Standard Product	DIP	Dual In-line Package
AST	Accelerated Stress Test	DL	Design Life
ATC	Accelerated Thermal Cycling	DMSMS	Diminishing Manufacturing Sources and Material Shortages
AWG	IECQ Avionics Working Group	DOE	Design of Experiment
a-Si	Amorphous Silicon	DOF	Degrees of Freedom
BEM	Boundary Element Method	DRAM	Dynamic Random Access Memory
BGA	Ball Grid Array	DSCC	Defense Supply Center Columbus
BME	Base Metal Electrode	DUT	Device Under Test
BT	Bismaleimide Triazine	DWV	Dielectric Withstanding Voltage
BV	Breakdown Voltage	ECL	Emitter-Coupled Logic
CA	Contract Assembly or Contract Assembler	ECM	Electrochemical Migration
CAGR	Compound Annual Growth Rate	ECMP	Electronic Component Management Plan
CALCE®	Center for Advanced Life Cycle Engineering	EDA	Electronic Design Automation
CB	Citizens Band	EDRAM	Embedded Dynamic Random Access Memory
CBGA	Ceramic Ball Grid Array	EDS	Electron Disruptive Spectroscopy
CCA	Circuit Card Assembly	EEPLD	Electrically Erasable Programmable Logic Device
CCD	Charge Coupled Device	EFIS	Electronic Flight Instrumentation System
CCGA	Ceramic Column Grid Array	EIA	Electronic Industry Association
CDM	Charged Device Model	ELD	Electroluminescent Displays
CECC	Cenelec Electronic Components Committee	EMC	Electromagnetic Compatibility
CFEM	Conventional Finite Element Method	EMC	Encapsulated Molding Compound
CFE	Conductive Filament Formation	EMCS	Electromagnetic Compatibility Society
CL	Confidence Level	EMI	Electromagnetic Interference
CLPT	Classical Laminated Plate Theory	EMS	Electronic Manufacturing Services
CM	Contract Manufacturing or Contract Manufacturer	EN	Euro Norms (European Standards)
CMM	Component Maintenance Manual	EOL	End of Life
CMOS	Complementary Metal Oxide Semiconductor	EP	Energy Partitioning
		EPLD	Erasable Programmable Logic Device
		EPSC	Electronics Products and Systems Center/Consortium
		ESD	Electrostatic Discharge

ESEM	Environmental Scanning Electron Microscope	IEC	International Electrotechnical Commission
ESR	Equivalent Series Resistance	IECQ	International Electrotechnical Commission Quality Assessment System for Electronic Components
ESS	Environmental Stress Screening	IEEE	Institute of Electrical and Electronic Engineers
EU	European Union	IFE	In-Flight Entertainment
FAA	Federal Aviation Agency	IGBT	Integrated Gate Bipolar Transistor
FADEC	Full Authority Digital Engine Control	IMA	Integrated Modular Avionics
FAR	Federal Aviation Regulations	IP	Intellectual Property
FBGA	Fine pitch ball grid array	IPC	Institute for Interconnecting and Packaging Electronic Circuit
FCC	Federal Communications Commission	IPD	Integrated Passive Devices
FCOB	Flip Chip On Board	IR	Infra Red/Insulation Resistance
FCOC	Flip Chip On Ceramic	IRC	International Resistive Company
FCOF	Flip Chip on Flex	Isat	Saturation Current
FDTD	Finite Difference Time Domain	ITO	Indium tin oxide
FEA	Finite Element Analysis	JAN	Joint Army Navy
FED	Field Emission Displays	JAR	Joint Aviation Regulation
FEM	Finite Element Method	JEDEC	Joint Electron Device Engineering Council
FET	Field Effect Transistor	LCA	Logic Cell Array
FFF	Form Fit and Function	LCCC	Leadless Ceramic Chip Carrier
FFOP	Failure-Free Operating Period	LC	Liquid Crystal
FMEA	Failure Mode and Effect Analysis	LCD	Liquid Crystal Display
FMECA	Failure Mode Effect and Criticality Analysis	LCM	Life Consumption Monitoring
FPGA	Field Programmable Gate Array	LGA	Land Grid Array
FRACAS	Failure Reporting, Analysis and Corrective Action System	LIF	Low Insertion Force
FSDT	First-order Shear Deformable Theory	LIGA	Acronym from German words for lithography, electroplating, and molding
FTA	Fault Tree Analysis	LM	Life Margin
GA	Gate Array	LOT	Life of Type
GAL	Generic Array Logic/Lattice	LPCC	Leadless Plastic Chip Carrier
GEM	Generalized Emulation of Microcircuits	LRM	Line Replaceable Module
GIDEP	Government Industry Data Exchange Program	LRU	Line Replaceable Unit
GPC	Government Procurement Committee	LSI	Large Scale Integration
GPWS	Ground Proximity Warning System	LTB	Last Time Buy
HALT	Highly Accelerated Life Test	LTOL	Low Temperature Operating Life
HASS	Highly Accelerated Stress Screening	LVCES	Low Volume Complex Electronic System
HAST	Highly Accelerated Stress Test	LVT	Low Voltage (BiCMOS) Technology
HBM	Human Body Model	LWDT	Layer-Wise Deformable Theory
HDL	Hardware Description Language	MAX	Multiple Array Matrix
HDTV	High Definition Television	MBGA	Metal Ball Grid Array
HM	Health Monitoring	MCM	Multi-Chip Module
HSDT	Higher-order Shear Deformable Theory	MDRR	Multi-Domain Rayleigh Ritz
HSOP	Small Outline Package with a Heat Sink	MDSDT	Material Dependent Shear Deformable Theory
HTCC	High Temperature Cofired Ceramic	MEMS	MicroElectroMechanical Systems
HTOL	High Temperature Operation Life	MFG	Mixed Flowing Gases
HTRB	High Temperature Reverse Bias	MFOP	Maintenance Free Operating Period
HTS	High Temperature Storage	MLCC	Multilayer Ceramic Capacitor
HTTP	Hyper - Text Transfer Protocol	MLD	Minimum Life Desired
I/O	Input/Output	MM	Machine Model
IC	Integrated Circuit	MMC	Metal Matrix Composite
IDDQ	Quiescent Current		
ISDA	Incremental Damage Superposition Approach		
IDT	Integrated Device Technology		

Mn	Metal level number n	PWA	Printed Wiring Assembly
MOCA	Mitigation of Obsolescence Cost Analysis	PWB	Printed Wiring Board
MoL	Method of Lines	PZT	Lead Zirconate Titanate
MoM	Method of Moments	QFP	Quad Flat Pack
MOS	Metal Oxide Semiconductor	QML	Qualified Manufacturer List
MOSFET	Metal Oxide Semiconductor Field Effect Transistor	QPL	Qualified Part List
MRP	Maintenance Recovery Period	QRD	Quality Reliability Durability
MSL	Moisture Sensitivity Level	RDF	Range Distribution Function
MTBF	Mean Time Between Failures	RDSON	Drain to Source On Resistance
MTBUR	Mean Time Between Unscheduled Removals	RET	Reliability Enhancement Test
MTTF	Mean Time to Failure	RF	Radio Frequency
NCMS	National Center for Manufacturing Sciences	RFI	Radio Frequency Interference
NEC	Numerical Electromagnetic Code	RH	Relative Humidity
NEMI	National Electronics Manufacturing Initiative Inc.	RMS	Root mean square
NEMP	Nuclear Electromagnetic Pulse	ROI	Return On Investment
NFEM	Nested Finite Element Method	RT	Room Temperature
NFF	No Fault Found	S&A	Safety and Arming
NIF	Normal Insertion Force	SAC	Tin Silver Copper (SnAgCu)
NRE	Non-Recurring Engineering	SAE	Society of Automotive Engineers
NSWC	Naval Surface Warfare Center	SAM	Scanning Acoustic Microscope
OEM	Original Equipment Manufacturer	SARA®	Simulation Assisted Reliability Assessment
OLED	Organic Light Emitting Diodes	SBGA	Super Ball Grid Array
OOD	Ordered Overall Range	SC	Standard Cell
PAL	Programmable Array Logic	SCMOS:	Scalable Complementary Metal Oxide Semiconductor
PASIC	Programmable Application Specific Integrated Circuit	SDA	Spectral Domain Approach
PBGA	Plastic Ball Grid Array	SDDV	Stress-Driven Diffusive Voiding
PBT	Parasitic Bipolar Transistor	SDU	Shop Discardable Unit
PC	Pre-Conditioning	SE	Shielding Effectiveness
PC FAB	Printed Circuit Fabrication	SEM	Scanning Electron Microscope
PCB	Printed Circuit Board	SI	Signal Integrity
PCM	Phase Change Material	SIA	Semiconductor Industry Association
PCN	Product Change Notice	SILC:	Stress Induced Leakage Current
PDI	Precision Devices Incorporated	SM	Surface Mount
PDN	Product Discontinuance Notice	SMD	Standard Microcircuit Drawing
PDP	Plasma Displays Panel	SMT	Surface Mount Technology
PEEC	Partial Element Equivalent Circuit	SOC	System-On-Chip
PFC	Primary Flight Control	SOIC	Small Outline Integrated Circuit
PGA	Pin Grid Array	SOP	System-On-Package / Small Outline Package
PHM	Prognostic Health Monitoring	SOWIC	Small Outline Wide Integrated Circuit
PLA	Programmable Logic Array	SPC	Statistical Process Control
PLCC	Plastic Leaded Chip Carrier	SPICE	Simulation Program with Integrated Circuit Emphasis
PoF	Physics of Failure	SPLD	Simple Programmable Logic Device
PoP	Package on Package	SRAM	Static Random Access Memory
POS	Proof of Screen	SRU	Shop Replaceable Unit
PPM	Parts Per Million	SUBM	Submicron
PQFP	Plastic Quad Flat Pack	TAB	Tape Automated Bonding
PSD	Power Spectral Density	TBGA	Tape Ball Grid Array
PT	Punch Through	TC	Temperature Cycle
PTH	Plated-Through Hole	TCAS	Traffic-alert Collision Avoidance System
PTV	Plated-Through Via	TCTF	Time-, Cycles- to Failure
		Tddb	Time-Dependent Dielectric Breakdown

TEM	Transverse Electromagnetic
TFT	Thin film transistor
Tg	Glass Transition Temperature
TH	Through Hole
THB	Temperature, Humidity and Bias
TI	Transfer Impedance
TLM	Transmission Line Matrix
TMM	Thermo-Mechanical Microstructural
TS	Thermal Shock
TSMC:	Taiwan Semiconductor Manufacturing Corporation
TTF	Time to Failure
TTL	Transistor-Transistor Logic
UBGA	Micro Ball Grid Array
UV	Ultraviolet
VCO	Voltage Controlled Oscillator
VDCEP	Volume Driven Commercial Electronic Product
VHDL	VHSIC Hardware Description Language
VHSIC	Very High-Speed IC
VLSI	Very Large Scale Integration
VQ	Virtual Qualification
Vt	Threshold Voltage
WEEE	Waste from Electrical and Electronic Equipment
WLP	Wafer Level Package
xPyM	x Polysilicon and y Metal
ZIF	Zero Insertion Force