Power Electronics Milestones

Year	Milestone	Source	Notes
1799	Alessandro Volta invented electric or voltaic battery using copper & zinc	www.ieee.org	
1809	Sir Humphrey Davy demonstrates the arc lamp, 1st electric lamp	www.ieee.org	uses a lot of current and
1831	Faraday invents electric dynamo (generator)	www.electricityforum.com	
	Edison invents DC generator	www.electricityforum.com	
1835	Joseph Henry invents the electromechanical relay	Much Ado About Almost Nothing: Man's Encouter With	
1852	William Channing & Moses Farmer invented the 1st municipal electric fire a	www.ieee.org	
1866	Werner von Siemens invents the dynamo	www.siemens.com	
1870	Paul Jablochkoff invents the Jablochkoff Candle	www.ieee.org	arc light with extra carb
1873	Frederick Guthrie discovers thermionic rectifiers, vacuum tube devices	www.tech-faq.com	
1874	Karl Ferdinand Braun discovers crystal rectifiers	http://chem.ch.huji.ac.il/history	led to "cat's whisker" cr
1878	Joseph Swan invents incandescent filament lamp	www.electricityforum.com	
	Tesla patents motor for generating AC	www.electricityforum.com	
	Westinghouse develops AC Generator	www.electricityforum.com	
	Edison founds Edison Light Company	www.ge.com	
1879	Edison invents carbon filament lamp, 1st commercially practical lamp	www.ge.com	enabled by vacuum pur
	Edison discovers 1st dynamos (convert mechanical energy into electrical)	www.ge.com	
1880	Thomson-Houston Company founded to sell arc lamps	web.mit.edu	
	Werner von Siemens demonstrates 1st electric powered elevator at Mannh	www.ieee.org	hoists were not new, bu
	Pierre & Jacques Curie discover the piezoelectric effect	Electronics: The Life Story of a Technology, David L. M	
1882	Edison Electric Illuminating Company builds Americas 1st Central Power St	www.ge.com	1st power and electric li
1886	William Stanley demos 1st practical electrical illuminating system with alterr	www.ieee.org	
	Westinghouse's William Stanley invents transformer for long-distance alterr	www.westinghouse.com	
1888	Oliver Schallenberger invents 1st AC ampere hour meter	www.westinghouse.com	
	Frank Julian Sprague designed the electric street railway for Richmond, VA	www.ieee.org	
	Nikolai Tesla builds 1st AC motor	www.westinghouse.com	
1891	Westinghouse introduces oil filled transformers for a 10,000V transmission	www.westinghouse.com	
	Westinghouse builds 1st commercial AC system (Ames Hydroelectric Gene	www.ieee.org	Part of the war between
	Tesla invents the Tesla Coil	www.teslapress.com	
1892	General Electric is formed from a merger of Edison General Electric Compa	www.ge.com	
1894	Westinghouse introduces 1st practical polyphase induction motors	www.westinghouse.com	
1895	Westinghouse introduces 1st practical electric locomotive	www.westinghouse.com	
	AC becomes standard throughout US.	www.westinghouse.com	
	GE builds largest transformer (800kW)	www.ge.com	

	Wilhelm Conrad Roentgen discovers X-Rays	www.ge.com	
1896	GE's Elihu Thomson builds electrical equipment for X-Ray production	www.ge.com	
1897	Karl Ferdinand Braun invents a cathode ray oscillascope & indicator tube	www.ieee.org and http://chem	forerunner of the TV tub
1899	Karl Ferdinand Braun patents crystal rectifiers	http://chem.ch.huji.ac.il/history/braun.htm	
1901	Peter Cooper Hewitt 1st demonstrated a glass bulb mercury arc rectifier	Power Electronics and Motor I	1st static rectifier, previo
1902	James J Woods, consulting engineer for GE, receives patents for the electr	www.ge.com	
	Otis Elevator Co. invents the gearless, traction electric elevator	www.ieee.org	enabled by electro-mec
1904	John Ambrose Fleming constructs & patents the diode (Fleming valve)	www.ieee.org	a high vacuum thermior
	Cutter Electric & Manufacturing intros 1st circuit breaker (Inverse time elem	www.swgr.com	
1905	GE's 1st electric toasters goes on the market	www.ge.com	
1906	1st voice radio broadcast uses high frequency alternator from Ernst Frederi	www.ge.com	
	Lee de Forest applies for patent for triode valve, a 3 electrode vacuum tube	A History of World Semiconductor History, Peter Robir	
3/4/06	Robert von Lieben applied for a patent on a cathode ray relay, electron tube	www.ieee.org	
1907	Semiconductor diode (point contact type) invented	Electronics: The Life Story of a Technology, David L. M	
1908	Peter Cooper Hewitt patents a steel tank rectifier	Electric Railways 1880-1990, Michael C. Duffy, 2003, p	
1909	GE's William D. Coolidge discovers ductile tungsten filament	www.ge.com	
1910	GE introduces the electric range	www.ge.com	
1911	Delco's Charles Kettering invents the electric self starter for cars	www.gm.com	Becomes a standard fea
1912	GE introduces the vacuum tube	www.ge.com	commercially available
	GE intros 1st electrically propelled US Navy vessel, U.S.S Jupiter	www.ge.com	
	GE intros phenolic resins (plastics) as an electrical insulator	www.ge.com	
	GE replaces the cold aluminum cathode in an X-ray tube with hot tungsten	www.ge.com	for better control & grea
	GE's E.F.W. Alexanderson applied for a patent for a magnetic amplifier	The Evolution of Power Electronics, Thomas G. Wilson	
1913	1st mercury arc rectifier	www.abb.com	
4/1913m	Western Electric developed the high vacuum tube	www.porticus.org/bell/westernelectric_history.html	
1914	Largest electrical installation: Panama Canal ~30,000HP	www.ge.com	GE designed the selsyn
1915	GE develops Calrod (electrically insulating, heat conducting ceramic) for ele	www.ge.com	
	Detroit Fuse & Manufacturing (Square D) intros a sheet metal enclosed safe	http://www.squared.com/us/squared/corporate_info.ns	
1917	Westinghouse introduces 1st all electric range	www.westinghouse.com	
	GE intros the electric home refrigerator (hermetically sealed)	www.ge.com	
	Cutter Electric & Manufacturing intros 1st shock hardened circuit breaker	www.spdtech.com	
1918	GE's Albert W. Hull invents magnetron (vacuum tube using magnetic field to	www.ge.com	
	GE build largest capacity (32,500KVA, 12kV) water wheel generator for Nia	www.ge.com	
	GE designs an alternator (200kW, 25,000 cycle) for transatlantic radio broa	www.ge.com	
1919	Tesla publishes an article on wireless radio	www.telsapress.com	
1920	GE designs an oil-immersed x-ray tube & transformer assembly for portable	www.ge.com	
Aug-20	Johann S.C. Schweigger invents & builds a moving coil galvanometer	http://chem.ch.huji.ac.il/history	1st sensitive instrument
1921	1st factory built radios for home use	www.westinghouse.com	

	GE's Sanford Moss invents a supercharger for high altitude flights & fast ca	www.ge.com	check date
	Merlin Gerin manufactures first high voltage oil circuit breakers	www.schneider-electric.us	
1922	GE's WGY, one of the 1st radio broadcasting stations uses a 1500W transn	www.ge.com	
1923	Harry Bussmann receives 2 patents for cartridge and electric fuses	www.cooperbussmann.com	
	Westinghouse develops 1st compact, workable circuit breaker	www.eatonelectrical.com	modified arc extinguishe
1924	1st successful electric iron	www.westinghouse.com	
	Raytheon invents a "gaseous rectifier" tube	www.raytheon.com	allow radios to be direct
1926	Development of grid-glow tube ("electric eye")	www.westinghouse.com	
	H.J. Round develops the screen grid tetrode	A History of World Semiconductor History, Peter Robir	
	Electric Power Club merged with Associated Manufacturers of Electrical Su	ewh.ieee.org/soc/pes/switchgear/presentations	
1927	1st TV home reception in NY	www.ge.com	
	L.O. Grundahl and Geiger invented the copper-oxide rectifier	A History of World Semiconductor History, Peter Robir	
	Westinghouse intros 1st complete circuit breaker line 10-600A, 600V	www.eatonelectrical.com	
1928	1st television camera tube (iconoscope)	www.westinghouse.com	
	C.E. Fitts invented the selenium rectifier	A History of World Semiconductor History, Peter Robir	
	Philips' Teligen & Holst invented the pentode which used a suppressor grid	A History of World Semiconductor History, Peter Robir	
	1st thermal trip circuit breaker	www.westinghouse.com	
	1st commercial thyratrons introduced	www.wikipedia.com	
	Raytheon's Percy Spencer invents the BA (vacuum) tube	www.raytheon.com	Full wave rectifier for ar
1929	1st major application of electronic control at Chicago Civic Opera with stepl	www.ge.com	
	Fusetron fuse technology patented	www.cooperbussmann.com	
1930	Siemens delivers a water based expansion circuit breaker	www.siemens.com	Previously used oil filled
	Invented indirect heated cathode (via AC supply) eliminates a separate low	A History of World Semiconductor History, Peter Robir	
1930	Earnest O Lawrence develops the cyclotron (atom smasher)	www.westinghouse.com	Not by Westinghouse
	1st electric clothes washer introduced.	www.ge.com	
	Empire State Building built with safety switches, panel boards & switchboar	www.ge.com	
	Moldable plastics enable mass production	www.ge.com	
1932	1st ignition mercury arc rectifier called Ignitron invented by Joseph Slepian	www.westinghouse.com	
1933	Westinghouse announces the Ignitron	Electronic Inventions and Discoveries: electronics from	
1935	GE intros the 1st household electric food waste disposer "Disposall"	www.ge.com	
	GE Novalux lamps enables night sport games	www.ge.com	
	Square D manufacturers first circuit breaker for use in homes	www.schneider-electric.us	
	O. Heil & A. Heil invent the travelling wave microwave oscillator, a type of e	A History of World Semiconductor History, Peter Robir	
1936	GE introduces the Juice-o-Mat, "A-la-carte" table cooker, portable mixer, Hc	www.ge.com	
	Klystron invented by Sigurd & Russell Varian	www.varianinc.com	
1937	Merlin Gerin develops the pneumatically operated circuit breaker	www.schneider-electric.us	
1938	GE invents the 1st practical low pressure discharge lamp to provide white li	www.ge.com	
	Ericsson starts manufacturing electron tubes	www.ericsson.com	

1939	John T. Randall & Henry A. Boot at the University of Birmingham, England i	A History of World Semiconductor History, Peter Robir	
	Varians formally announce the invention of the Klystron	www.varianinc.com	
1940	GE invents silicones for electronics components protection	www.ge.com	
	1st TV network from WRGB relays broadcasts from New York	www.ge.com	
	Raytheon begins experimental production of cavity magnetrons	www.raytheon.com	
1941	GE intros 1st US Jet Engine	www.ge.com	
	Proximity Fuse (detonated an artillery shell when it was close to its target) v	Scientific American Inventions and Discoveries, Rodne	
1942	1st successful turboprop airplane: Bell XP-59 Airacomet	www.ge.com	
	Proximity fuse goes into production by Crosley Corporation	Scientific American Inventions and Discoveries, Rodne	
1943	GE develops automatic pilot (auto pilot)	www.ge.com	
	Bell Telephone Labs' Rudolf Kompfner, A. W. Haeff, & John R. Pierce creat	Electronics: The Life Story of a Technology, David L. M	
1945	GE demonstrates 1st commercial use of radar	www.ge.com	
1946	GE intros most popular jet engine J47 with 5,000 pound-thrust.	www.ge.com	
	GE's Vincent Schaefer develops cloud seeding to make rain	www.ge.com	
	Raytheon's Percy Spencers accidentally discovers microwave cooking	www.raytheon.com	
Dec-47	Bell Labs' Shockley, Bardeen & Brattain invented 1st transistor (point conta	www.ieee.org	
	GE produces 1st 2 door refrigerator-freezer combination	www.ge.com	
	GE intros 1st custom-matched cooking equipment for fast food service ope	www.ge.com	Hotpoint
	Raytheon intros the Radarange microwave ovens to commercial customers	www.raytheon.com	
1948	Raytheon intros the 1st commercially available (point contact) germanium t	www.raytheon.com	
1949	Bell Labs' Shockley develops junction transistor theory	www.ck722museum.com	
1950	Bell Labs creates 1st grown junction transistor (BJT)	www.ieee.org	
1951	GE & RCA develop 1st alloy junction transistors	www.transistormuseum.com	
Jul-51	Bell Labs announced the creation of a bipolar junction transistor	www.ourworld.compuserve.com/homepages/Andrew_	
Sep-51	Bell Labs held transistor symposium and licenses transistor technology for	www.ourworld.compuserve.com/homepages/Andrew_	
	Bell Labs releases exploratory datasheets on 1st commercial quality junctio	www.ck722museum.com	
	GE begins work on most famous military engine J79 with variable stator	www.ge.com	
	Square D intros first plug-in circuit breaker distribution panelboard	www.schneider-electric.us	
1952	GPC intros 1st commercial grown junction transistor, 2517 series)	www,transistormuseum.com	
	AEG mass produces 1st power thyristors	www.aegps.com	
1953	GE's Daniel W. Fox discovers Lexan polycarbonate resin	www.ge.com	
Mar-53	Raytheon intros the CK722 (actually CK718 rejects), the 1st low cost (germ	www.ck722museum.com & iee	1st mass produced junc
1954	GE intros 1st fully automatic portable dishwasher, Mobile Maid	www.ge.com	
	IR intros 1st commercial germanium rectifiers	www.irf.com	
	Dan Noble (Motorola) invents germanium power transistors	www.edn.com	
	Honeywell intros 2N57, 1st true (pnp) germanium power transistor (20W)	www.transistormuseum.com	
4/14/54	TI invents the silicon transistor	www.ti.com	
5/10/54	Gordon Teal (TI) presents the 1st silicon junction transistor and announces	www.ti.com	

1955	GE intros 1st hermetically sealed micro miniature relay for aircraft & aerosp	www.ge.com	
	GE invents the 1st reproducible process for making diamonds	www.ge.com	
	GE intros a 5A germanium rectifier (4JA3011 series)	www.semiconductormuseum.com/transistors/GE/Oralk	
	Square D intros the QO circuit breaker & solid state relays	http://www.squared.com/us/sq	previous circuit breaker
1956	GE invents 1st toaster oven, T-93 Toast-R-Oven	www.ge.com	
	GE produces the Convair Skylark, GE CJ805, fastest jet engine for commer	www.ge.com	
	GE's Allen S Hay invents Noryl resin, plastic with high strength at high temp	www.ge.com	
	TI intros 1st commercially available silicon transistors, 2N117-2N119 (NPN)	homepages.nildram.co.uk/~wylie/2Nseries/2Nseries.ht	
	Gordon Hall (Bell Labs) invents the silicon controlled rectifier (SCR)	www.edn.com	
	John Moll (Bell Labs) invents PNPN Transistor (SCR)	Electronics: The Life Story of a Technology, David L. M	
1957	GE develops J93, 1st engine to go 3x the speed of sound	www.ge.com	
	GE opens 1st licensed nuclear power plant	www.ge.com	
	GE's Robert H Wentorf Jr. invents Borazon, cubic boron nitride	www.ge.com	
	GE announces 1st silicon controlled rectifiers (SCRs) or thyristors (120V &	www.semiconductormuseum.c	Also marketed as solid
	TI intros the 1st silicon mesa medium power transistor, 2N497	www.smithsonianchips.si.org	
1958	GE intros automatic electric can opener	www.ge.com	
	Fairchild intros 1st commercial double diffused (emitter & base) silicon mes	www.computerhistory.org	
	Farichild's Robert Noyce develops a monolithic integrated circuit	www.fairchildsemi.com	
	Fairchild's Jean Hoerni develops the planar transistor process	www.fairchildsemi.com	allows silicon to be mac
9/12/58	TI's Jack Kirby demonstrates 1st IC that he invented	www.ti.com	
	IR intros solar cells	www.irf.com	
	IR intros 1st commercial zener diodes	www.irf.com	
	Varian Associates productizes the Vaclon Pump technology	www.varianinc.com	improved tube lifetime
1959	GE intros 1st halogen lamps	www.ge.com	
	TI intros 1st commercial IC	www.transistormuseum.com	
	GE ships production units of the SCRs or thyristors	www.semiconductormuseum.com/transistors/GE/Oralk	
	IR intros its 1st silicon controlled rectifiers (SCRs) or thyristors	www.irf.com	
	Bell Labs (M.M. [John] Atalla & Dawon Kahng) invents 1st MOSFET transis	www.computerhistory.org	
	Fairchild invents 1st working planar (NPN) transistor	www.computerhistory.org	
	Basler Electric intros SR series voltage regulator	www.basler.com	1st to use solid state tec
1960	GE's Discovery VIII is the 1st man made object to be recovered from Earth'	www.ge.com	
	Hughes invents 1st working laser (used solid ruby crystal and spiral xenon f	www.raytheon.com	
Jan-60	Fairchild intros 1st commercial planar diode	www.computerhistory.org	
Apr-60	Fairchild intros the 1st commercial planar transistor, 2N1613	www.computerhistory.org	
May-60	Fairchild makes 1st commercial monolithic IC with a metal over oxide conne	www.computerhistory.org	
	Fairchild's CT Sah invents a MOS-controlled tetrode	www.computerhistory.org	
	Bell Labs develops an epitaxial deposition process for transistors	www.computerhistory.org	raised transistor breakd
Sep-60	Rheem intros 1st epitaxial transistor, RT409	History of Semiconductor Engineering, Bo Lojek, Sprin	

1961	GE intros the automatic toothbrush	www.ge.com	
	GE intros the Lucalox lamp	www.ge.com	
	1st commercial IC introduced	Fabless Semiconductor Implementation, Rakesh Kum	
Jul-61	Fairchild intros the 1st silicon transistor to switch faster than a germanium t	www.computerhistory.org	through gold doping
	Teradyne (Nicolas DeWold & Alex d'Arbeloff, founders) built the D133 diode	www.computerhistory.org	
	AEG produces SEMITAKT, 1st single phase power controller for ohmic load	www.aegps.com	
1962	GE builds a superconducting magnet 100,000+ gauss	www.ge.com	enables MRI
	GE's Bob Hall invents solid state lighting	www.ge.com	enables lasers, CD play
	IR develops the 1st epitaxial process for producing stable high voltage SCR	www.irf.com	
	Exide Electronics Group intros 1st AC power inverter	www.eaton.com	
1963	GE invents the self cleaning oven using pyrolytic techniques to remove food	www.ge.com	
3/25-28/196	1st IEEE (formerly IRE) convention at New York Coliseum	www.semiconductormuseum.com/transistors/GE/Oralk	
	Bob Gutzwiller invents the Triac AC switch	www.semiconductormuseum.com/transistors/GE/Oralk	
	Class J time delay fuse patented	www.cooperbussmann.com	
1964	Siemens introduces a sulfur hexafluoride (SF6) based circuit breaker	www.siemens.com	
	MOSFETs became commercially available	www.computerhistory.org	
9/27/66	Bob Gutwiller (GE) granted patent for Triac AC switch	www.semiconductormuseum.com/transistors/GE/Oralk	
	National Semiconductor intros the LM100, monolithic voltage regulator	History of Semiconductor Engineering, Bo Lojek, Sprin	
1967	RO Associates intros 1st commercial 20KHz switching power supply	www.roassoc.com	
	National Semiconductor intros the LM100, monlithic voltage regulator (desig	www.national.com	1st commerical integrat
	Bob Widlar (National) designs the UA723		
	Bob Widlar (National) designs & intros the LM109	www.national.com	20W monolithic regulato
	Bob Widlar (National) designs & intors the LM101, monolithic operational ar	www.national.com	
	McGraw-Edison intros Low Peak fuse	www.cooperbussmann.com	
1968	GE's Jacob G Rabotin invents high efficiency x-ray phosphor to reduce exp	www.ge.com	
	National produces the LM100, its 1st monolithic IC	www.national.com	monolithic voltage regul
1969	Neil Armstrong lands on the moon	www.ge.com	
	Thyristers enabled high voltage DC (HVDC) transmission	www.siemens.com	
1971	GE intros 1st portable room air conditioner, Carry-Cool	www.ge.com	
	CFM International intros the CFM56 which combines the GE F101 and Frer	www.ge.com	
	Friemann & Wolf Gerätebau intros 1st plug in (wall outlet) power supply	www.awilco.dk	
	Bob Widlar (National) designs and intros the LM113	www.national.com	1st monlithic bandgap v
1972	Crydom invents solid state relay (SSR)	www.crydom.com	now part of Custom Ser

1974	IR intros 1st power transistors and Darlington transistors to use glass passi	www.irf.com	
	IR (inventors Tom Herman & Alex Lidow) intros the 1st hexagonal-celled po	www.irf.com	1st commercially viable
	Opto 22 intros the 1st liquid epoxy filled ("hockey puck") SSR	www.opto22.com	
	1st Powercon: National Solid-State Power Conversion Conference	www.apec-conf.org	
1975	SG1524, 1st PWM IC was invented (one of the 1st mixed mode Ics)	http://powerelectronics.com/power_management/pwm	
1976	Silicon General makes the SG1524 (designed by Bob Mammano) commerc	http://powerelectronics.com/power_management/pwm	
	National Semiconductor makes the 1st 3 terminal linear regulator (IC) (designed by Bob Dobkin) commercially available.		
	GE introduces computed tomagraphy scanner for fast body images	www.ge.com	
	Slobodan Cuk publishes his paper, "A General Unified Approach to Modelin	www.ieee.org	1st presents the Cuk Co
1977	Bergquist intros Silpad	www.powerelectronics.com	Replaces grease and m
4/12/77	Robert Dobkin (National) wrote the 1st article on adjustable linear regulator	en.wikipedia.org	
1978	GE intros 1st programmable digital clock radio	www.ge.com	
	GE intros food processors and SpaceMaker, 1st over the range microwave	www.ge.com	
	Cecil W Deisch (Bell Labs) presents "Simple switching control method char	www.edn.com	well cited paper on early
3/25/80	RCA (Carl F. Wheatley Jr. & Hans Becke) file for a U.S. patent for the IGBT	www.powerelectronics.com	
1981	GE intros fiber optics	www.ge.com	
	National intros 1st low dropout voltage regulator (LDO), LM2930	www.national.com	
	PULS intros 1st switched mode power supply for 19" racks with a particular	www.pulspower.com	
1982	GE (Nathan Zommer & Jayant Baliga) develop the IGBT	www.edn.com	
12/14/82	RCA (Carl F. Wheatley Jr. & Hans Becke) receives a U.S. patent for the IGE	www.powerelectronics.com	
	SGS intros 1st monolithic switching regulator, L296	www.powerelectronics.com	
	Edmund O Schweitzer III invents the 1st all digital protective relay & founds	www.selinc.com	
1983	GE intros the Signa magnetic resonance imaging (MRI) system	www.ge.com	
	IR intros the ChipSwitch, intelligent power IC	www.irf.com	1st commercially viable
	1st patents issued for power MOSFETs and IGBT products to IR	www.irf.com	
	RIFA Power (Ericsson Power Modules) intros its PKA DC-DC converter line	www.ericsson.com	1st brick
	China Power Supply Society (CPSS) founded	www.powerelectronics.com	
	FRIWO intros the 1st electronic power supply as a primary	www.friwo.de	
1984	Vicor intros VI-100 DC_DC- Converter, 1st brick (25W/in3)	www.vicorpower.com	changed paradigm of fo
	Bose (Tom Froeschle) patents hysteretic current mode control	www.edn.com	
	Schweitzer Engineering Laboratories (or SEL, inventor: Edmund O Schweit	www.selinc.com	provided fault locating,
	Power Sources Manufacturers Association (PSMA) founded	www.powerelectronics.com	
1985	Motorola Semiconductor intros the DPAK, surface mount power package	www.powerelectronics.com	
	PULS intros over 85% efficiency for a 5V/50A power supply; first automatic	www.pulspower.com	
1986	Linear Technology intros 1st bipolar low dropout (LDO) regulator IC	www.powerelectronics.com	
Apr 28-May2	1st Applied Power Electronics Conference (APEC)	www.apec-conf.org	held in New Orleans, LA
1987	Motorola Semiconductor intros 1st monolithic MOSFET motor control	www.powerelectronics.com	

	Multisource Technology intros planar magnetics for power supply applicatio	www.powerelectronics.com	founded by Alex Estrov
1988	Argus intros 1st commercial 48V 100A switch mode rectifier	www.argus.ca	
	IEEE forms the Power Electronics Society (PELS)	www.edn.com	
	Vicor intros 1st half brick	www.powerelectronics.com'	
11/30/88	GE announces the MOS Controlled Thyristor (MCT)	The Power Electronics Handbook, Timoty L. Skvarenir	
1989	IR and Motorola Semiconductor qualify MOSFETs with a max junction temp	www.powerelectronics.com	
1990	RO Associates intros its MicroVerter line	www.roassoc.com	
	National Semiconductor intros its SIMPLE SWITCHER regulators IC line	www.national.com	Combines control and fi
	National Semiconductor organizes industry's first power management grou	www.national.com	
Oct-91	Cree releases 1st commercially available SiC wafers	www.cree.com	
1992	GE builds Mars Observer for NASA	www.ge.com	
	Linear Technology intros 1st synchronous switching regulator IC	www.powerelectronics.com	
	Cooper Bussmann intros LPCC midget time delay fuse	www.cooperbussmann.com	
1993	Clinical investigations begin on Magnetic Resonance-guided Therapy (MRT	www.ge.com	
	Toshiba intros 1700V IGBTs	www.toshiba-components.com	
	Ericsson intros MacroDens DC-DC Converter module	www.ericsson.com	most sold commercial D
	Cooper Bussmann intros surface-mount chip fuses	www.cooperbussmann.com	
1994	Siliconix intros 1st trench power MOSFETs	www.powerelectronics.com	
	Power Integrations intros 1st 3 terminal integrated high voltage CMOS off-li	www.powerelectronics.com	
1995	Eurpoean Power Supply Manufacturers Association (EPSMA) formed	www.epsma.com	
	National intros 1st LDO in SOT package, LP2980	www.national.com	
1996	IR develops 1st 4 mask MOSFET manufacturing process	www.irf.com	Huge cost savings
	IR intros the 1st MOSFET and Schottky diode in a single package, FETKY	www.irf.com	
	ABB develops the integrated gate commutated thyristor (IGCT)	www.edn.com	
	Vicor intros 1st quarter brick	www.powerelectronics.com	
1998	GE intros Lightspeed, QX/I CT scanner which is 6x faster than single slice s	www.ge.com	
	Fairchilds intros RC5051, 1st to use switches? In DC-DC conversion for PC	www.fairchildsemi.com	
1999	GE intros GE90-115B with 115,000 pound-thrust for Boeing's 777	www.ge.com	
	GE develops functional anatomical mapping	www.ge.com	
	SynQor intros a 30A DC-DC converter using synchronous rectification	www.powerelectronics.com	
	Siemens presents the CoolMOS superjunction FET at IEEE ISPSD Confere	www.powerelectronics.com	
10/25/99	National Semiconductor intros online simulation and tutorials for switch-mo	www.national.com	
2000	GE intros full field digital mammography	www.ge.com	
	GE intros the TM25000, a 22.8MW power plant on wheels, largest mobile g	www.ge.com	
	Fairchilds introsFDZ204P, 1st MOSFET in Ball Grid Array (BGA) packaging	www.fairchildsemi.com	
	IR intros 1st wafer-level power packaging, FlipFET	www.irf.com	targetted to portable ap
	STMicroelectronics intros high voltage mesh technology to reduce on resist	www.powerelectronics.com	
	Volterra Semiconductor intros 1st integrated digital voltage regulators, VT1(	www.volterra.com	not sure of source

	Cooper Bussman receives 5 patents on its finger-safe CUBEFuse	www.cooperbussmann.com
	National intros WEBENCH online design environment for power supplies	www.national.com
2001	GE intros Discovery LS	www.ge.com
8/22/01	Volterra Semiconductor awarded digital voltage regulation patent	www.freepatentsonline.com
	iWatt intros a digital power supply controller	www.powerelectronics.com
	National intros 1st white LED driver, LM2791 & LM2792	www.national.com
2002	GE works on U.S. Laboratory Destiny for the International Space Station fo	www.ge.com
	GE intros 1st 4D ultrasound imaging system, GE Voluson 730	www.ge.com
	1st eighth brick introduced	www.powerelectronics.com
	IR intros the DirectFET, a packaging technology breakthrough	www.irf.com
2003	GE intros Harmony, 1st clothes system where the washer electronically con	www.ge.com
	GE intros Trivection, 1st three technology (thermal, convection and microwa	www.ge.com
	Fairchild intros FSBB20CH60, smallest package for 3 phase inverter modul	www.fairchildsemi.com
	Vicor intros , Factorized Power Architecture (FPA)	www.vicorpower.com
4/15/03	Astec Power intros 1st sixteenth brick, the 50W ALX series	darnell.com
	National intros PowerWise adaptive voltage scaling technology	www.national.com
2004	Power-One intros a non-isolated DC-DC converter using a digital PWM con	www.powerelectronics.com
2/2/04	Tyco Electronics and SynQor create the Distributed-power Open Standards	www.dosapower.com
4/6/04	Distributed-power Open Standards Alliance (DOSA) announces its standarc	www.dosapower.com
2005	Power Sources Manufacturers Association (PSMA) and the China Power S	www.powerelectronics.com
1/10/06	Apple releases a magnetic power connector MagSafe on its MacBook Pro l	www.apple.com/pr/library/200 Prevents damage due t
11/14/07	TranSiC intros the 1st commercial "normally off" SiC Bipolar Junction Powe	www.transic.com
2008	National intros SolarMagic power optimizers that improve the energy outpu	www.national.com