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This index covers all items – papers, correspondence, reviews, etc. – that appeared in this periodical during 1976, and items from prior years that were commented upon or corrected in 1976. The index is divided into an Author Index and a Subject Index, both arranged alphabetically.

The *Author Index* contains the primary entry for each item; this entry is listed under the name of the first author and includes coauthor names, title, location of the item, and notice of corrections and comments if any. Cross-references are given from each coauthor name to the name of the corresponding first author. The location of the item is specified by the journal name (abbreviated), year, month, inclusive pages, and microfiche code. [The microfiche code, given in parentheses following the inclusive pages, consists of four characters to be interpreted as follows: the first character identifies the microfiche number within the set of fiches for the issue; the second character identifies the row in which the first frame of the particular item is located, and the last two characters designate the position of that frame within the row.]

The *Subject Index* contains several entries for each item, each consisting of a subject heading, modifying phrase(s), first author's name, and location of the item. For information on coauthors, title, comments and corrections if any, etc., it is necessary to refer to the Author Index. Some generic subject headings are used in this index in addition to the usual technical headings, e.g., *Books*, (books reviewed in this periodical), *Bibliographies* (both papers that are bibliographies and any other papers which contain more than 50 references), *Conferences* (technical meetings a substantial number of whose abstracts or papers have appeared in this periodical), and *Special Issues* (issues of this periodical devoted primarily to a specific subject). The Subject Index includes subject cross-references as required by the subject matter.

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microprogram sequences using isoplanar integrated-injection logic technology. *Crippen, Richard E., J-SC 76 Oct* 662-668 (2B01)

MOS RAMs; 16-kbit dynamic TTL-compatible memory. *Ahlquist, C. Norman, J-SC 76 Oct* 570-574 (1A07)
multipliers; three-gating stage 4×4 multiplier using modular single-stage universal logic gate. *Gaskill, James R., Jr., J-SC 76 Aug* 539-544 (2B07)
serial pipeline multipliers; low-power bipolar two's complement multiplier chip. *Kane, Jack, J-SC 76 Oct* 669-678 (2B08)
universal logic gates; modular single-stage gate. *Gaskill, James R., Jr., J-SC 76 Aug* 529-538 (2A11)
Bipolar integrated circuits, memory
read-only memories; laser coding. *North, James C., J-SC 76 Aug* 500-505 (1F03)
Bipolar transistors
defects; pipes causing emitter–collector shorts in integrated circuits. *Barson, Fred, J-SC 76 Aug* 505-510 (1F08)
emitter and collector resistances; error minimization in measurement. *Choma, John, Jr., J-SC 76 Apr* 318-322 (1F09)
emitter and collector resistances; determination in integrated bipolar structure. *Huang, J. S. T., J-SC 76 Apr* 343-344 (2B01)
fabrication of super-gain transistors for integrated circuits. *Gegg, Winifred M., J-SC 76 Aug* 485-491 (1E02)
fabrication using simultaneous diffusion of B and As from doped oxide source. *Saraswat, Krishna C., J-SC 76 Aug* 495-500 (1E12)
integrated high-frequency transistors with As-implanted polysil emitters. *Graul, Jürgen, J-SC 76 Aug* 491-495 (1E08)
modeling; two-lump model for computer circuit simulation. *Divekar, D. A., J-SC 76 Oct* 726-730 (1F09)
models; common-emitter short-circuit gain-bandwidth product of transistors operated in high-injection regime. *Choma, John, Jr., J-SC 76 Apr* 346-348 (2B04)
Bipolar transistors; cf. Microwave bipolar transistors; Power transistors; UHF bipolar transistors
Bipolar transistor amplifiers
differential amplifiers; offset voltage and common-mode rejection ratio. *Jaeger, Richard C., J-SC 76 Aug* 557-561 (2C11)
Bipolar transistor amplifiers; cf. Microwave bipolar transistor amplifiers; Power transistors
Bipolar transistor circuits
current dividers; precision active current splitters with high output impedance. *Barker, R. W. J., J-SC 76 Jun* 406-408 (1E03)
Bipolar transistor circuits; cf. Bipolar integrated circuits
Bipolar transistor switches
active crosspoints for telephone exchanges. *Danneels, Johan M. R., J-SC 76 Jun* 394-400 (1D05)
telephone switching; 4 × 4 array of active bipolar transistor crosspoints. *Danneels, Johan M. R., J-SC 76 Dec* 779-783 (1D02)
Blood flow measurement
ultrasonic Doppler flowmeters; implantable bidirectional flowmeter using micropower integrated circuits. *Frescura, Bert L., J-SC 76 Dec* 817-825 (1F12)
Breakdown: cf. Dielectric breakdown

C

Cameras; cf. TV cameras
Capacitors
single crystal Si–SiO_2–polycrystalline Si structures; dielectric field strength degradation. *Mattauch, R. J., J-SC 76 Oct* 732-735 (2G01)
Carrier processes; cf. Charge-carrier processes
CCD; cf. Charge-coupled devices
Charge-carrier processes; cf. Charge-carrier transport processes
Charge-carrier transport processes
CCD image sensors; charge-transfer efficiency in buried-channel linear imagers at very low signal levels. *Jack, Michael D., J-SC 76 Feb* 160-166 (2F03)
CCD memories; scaling procedure for surface-channel devices yielding constant transfer inefficiency. *Yau, Leopoldo D., J-SC 76 Feb* 214-219 (3D02)
CCDs; charge-transfer inefficiency in bulk devices. *Collet, M. G., J-SC 76 Feb* 156-159 (2E13)
CCDs; charge-transfer inefficiency in conductively connected devices at low frequencies. *Krambeck, R. H., J-SC 76 Feb* 171-180 (3A01)
surface channel devices; model for charge transport. *Scott, D. B., J-SC 76 Jun* 422-424 (1F05)
Charge-coupled devices
analog-signal processing techniques. *Hense, Karl R., J-SC 76 Feb* 197-202 (3B13)
charge-injection techniques; high-linearity surface-potential equilibration-type technique that does not require input clock. *Haken, Roger A., J-SC 76 Feb* 189-196 (3B05)
charge-injection techniques; simple linear surface-potential equilibration-type technique for two-phase CCD with overlapping electrodes. *Wang, Chi-Shin, J-SC 76 Feb* 232-233 (3E06)
charge-transfer inefficiency in bulk CCDs; effects of bulk traps. *Collet, M. G., J-SC 76 Feb* 156-159 (2E13)
charge-transfer inefficiency in electron-beam fabricated conductively connected CCDs at low frequencies. *Krambeck, R. H., J-SC 76 Feb* 171-180 (3A01)
charge transport in surface channel devices; model. *Scott, D. B., J-SC 76 Jun* 422-424 (1F05)
delay devices; dual differential analog device for sampled data analog signal processing applications. *Sealer, David A., J-SC 76 Feb* 105-108 (2B04)
electrode structures; two-phase and uniphase structures fabricated by offset-mask technique. *Mohsen, Amr M., J-SC 76 Feb* 180-188 (3A10)
fabrication; nonoverlapping gate technology. *Browne, V. A., J-SC 76 Feb* 203-207 (3C05)
filters; reprogrammable recursive filter bank for Doppler radar applications. *Mattern, John, J-SC 76 Feb* 88-93 (2A01)
input circuits; edge-triggered circuit with threshold correcting feature. *White, B. J., J-SC 76 Feb* 231-232 (3E05)
International Conference on the Application of Charge-Coupled Devices San Diego, CA, 1975; list of papers presented at conference, *J-SC 76 Feb* 234-235 (3E08)
peristaltic CCDs; twin-layer (profiled) device performance for different surface-layer doping levels. *Peek, Herman L., J-SC 76 Feb* 167-170 (2F10)
potential profile in bulk channel CCDs; solution using depletion approximation. *Dale, Brian, J-SC 76 Feb* 207-214 (3C09)
shift registers; noise in buried channel linear registers. *Brodersen, Robert W., J-SC 76 Feb* 147-155 (2E04)
surface potential of four-phase CCDs; calculation. *Schechter, Daniel, J-SC 76 Feb* 225-228 (3D13)
three-phase CCDs using three polysilicon levels and SiO_2–Si_3N_4 gate insulator; oxide growth in trichloroethylene ambient. *Declerck, Gilbert J., J-SC 76 Feb* 229-231 (3E03)
transversal filters; 500-stage filter for spectral analysis. *Brodersen, Robert W., J-SC 76 Feb* 75-84 (1F06)
transversal filters using optical inputs; optical convolvers. *Copeland, Miles A., J-SC 76 Feb* 84-87 (1G01)
Charge-coupled devices; cf. Charge-transfer devices
Charge-coupled image sensors
antiblooming method for linear imagers. *Mauthe, M., J-SC 76 Aug* 547-550 (2C01)
charge-transfer efficiency in buried-channel linear imagers at very low signal levels. *Jack, Michael D., J-SC 76 Feb* 160-166 (2F03)
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recent advances. *Barbe, David F., J-SC 76 Feb* 109-114 (2B08)
TV cameras; vertical frame transfer type sensor for 525-line TV format. *Séquin, Carlo H., J-SC 76 Feb* 115-121 (2B14)
Charge-coupled memories
electrode structures; polysilicon offset-mask structure. *Mohsen, Amr M., J-SC 76 Feb* 180-188 (3A10)
high-density memories; 16-kbit memory using condensed serial–parallel–serial structure on chip measuring 3.45×4.29 mm^2. *Rosenbaum, Stanley D., J-SC 76 Feb* 33-40 (1C06)
multiphase serial–parallel–serial memories; 4096-bit serial decoded memory. *Tchon, Wallace E., J-SC 76 Feb* 25-33 (1B12)
overview. *Terman, Lewis M., J-SC 76 Feb* 4-10 (1A05)
pulse Doppler radar signal processors. *Roberts, J. B. G., J-SC 76 Feb* 100-104 (2A13)
RAMs; continuously charge-coupled memory. *Hoffmann, Kurt, J-SC 76 Oct* 591-596 (1B14)
random-access memory cell. *Tasch, Al F., Jr., J-SC 76 Feb* 58-63 (1E03)
random access memory cells; charge capacity analysis. *Tasch, Al F., Jr., J-SC 76 Oct* 575-585 (1A12)
scaling procedure for surface-channel CCDs yielding constant transfer inefficiency. *Yau, Leopoldo D., J-SC 76 Feb* 214-219 (3D02)
serial memories; 16 384-bit, low-access time memory for high-volume product. *Chou, Sunlin, J-SC 76 Feb* 10-18 (1A11)
serial memories; 16-kbit block addressed memory. *Mohsen, Amr M., J-SC 76 Feb* 40-48 (1C13)
serial memories; 64-kbit block addressed memory. *Mohsen, Amr M., J-SC 76 Feb* 49-58 (1D08)
serial memories; 9216-bit NMOS/CCD memory organized as 1024 words by 9 bits. *Varshney, Ramesh C., J-SC 76 Feb* 18-24 (1B05)
Charge-injection devices; cf. Charge-transfer devices
Charge-injection image sensors
operating techniques and performance characteristic. *Burke, Hubert K., J-SC 76 Feb* 121-128 (2C06)
recent advances. *Barbe, David F., J-SC 76 Feb* 109-114 (2B08)
three-terminal imagers. *Jespers, Paul G. A., J-SC 76 Feb* 133-139 (2D04)
transparent metal oxide electrode imagers. *Brown, Dale M., J-SC 76 Feb* 128-132 (2C13)
Charge-transfer devices
analog signal processing applications. *Whitehouse, Harper J., J-SC 76 Feb* 64-65 (1E09)
filters; multiplexed recursive filters. *Gersho, Allen, J-SC 76 Feb* 214-219 (3D08)
multipliers; charge-transfer multiplying digital–analog converter. *Albarrán, Jose F., J-SC 76 Dec* 772-779 (1C09)
radar system applications; MTI delay line canceller and ECM memory. *Butler, Walter J., J-SC 76 Feb* 93-100 (2A06)
sense amplifiers for random-access one-device dynamic memory cell arrays. *Heller, Lawrence G., J-SC 76 Oct* 596-601 (1C05)
special issue; foreword. *Buss, Dennis D., J-SC 76 Feb* 3-4 (1A04)
special issue; joint issue with *Transactions on Electron Devices, J-SC 76 Feb* 3-233 (1A04)
transversal filters; split-electrode filter. *Baertsch, Richard D., J-SC 76 Feb* 65-74 (1E10)
Charge-transfer devices; cf. Charge-coupled devices; Charge-injection devices
CID; cf. Charge-injection devices
Circuits; cf. Networks
Circuit switching; cf. Telephone switching
CMOS
abbr. of Complementary metal-oxide semiconductor
CMOSFET integrated circuits
fabrication; deep-depletion-process technology for CMOS/SOS circuits. *Ipri, Alfred C., J-SC 76 Apr* 329-336 (2A01)
fabrication; double-diffused CMOS integrated circuit process. *Masuhara, Toshiaki, J-SC 76 Aug* 453-458 (1B12)
radiation-hardened circuits; process technology. *Dawes, William R., Jr., J-SC 76 Aug* 459-465 (1C04)
shift registers; CMOS/SOS semi-static registers. *Ipri, Alfred C., J-SC 76 Apr* 337-338 (2A09)
CMOSFET integrated circuits, analog
switches; monolithic 200-V CMOS analog switch. *Plummer, James D., J-SC 76 Dec* 809-817 (1F04)
CMOSFET integrated circuits, logic
programmable logic arrays; large static array using LOCMOS technology. *May, Peter, J-SC 76 Jun* 365-369 (1B04)
CMOSFET integrated circuits, memory
RAMs; monostable memory with self-refresh mode. *Shiga, Kazumasa, J-SC 76 Oct* 609-613 (1D04)
CMOSFET switches
analog switches; monolithic 200-V switch. *Plummer, James D., J-SC 76 Dec* 809-817 (1F04)
Color TV; cf. TV

Communication switching; **cf.** Telephone switching
Communication systems, **cf.** Digital communication; Optical communication; Radio communication
Companding
analog compandor using bipolar technology. *Todd, Craig C., J-SC 76 Dec* 754-762 (1B05)
integrated compandors; expander circuit using bipolar technology. *Erratico, Pietro G., J-SC 76 Dec* 762-772 (1B13)
Comparators
computer peripheral logic units; 128-bit multicomparator for performing search–sort function on arbitrary length data strings. *Mead, Carver A., J-SC 76 Oct* 692-695 (2D03)
integrated-circuit comparators; macromodel. *Getreu, Ian E., J-SC 76 Dec* 826-833 (2A01)
Complementary MOS; **cf.** CMOS
Computers; **cf.** Minicomputers
Computer applications: **cf.** Minicomputer applications
Computer applications, integrated-circuit design
bipolar transistors; two-lump model for computer circuit simulation. *Divekar, D. A., J-SC 76 Oct* 726-730 (1F09)
circuit simulation in presence of electrothermal interaction. *Fukahori, Kiyoshi, J-SC 76 Dec* 834-846 (2A09)
integrated-circuit comparators; macromodel. *Getreu, Ian E., J-SC 76 Dec* 826-833 (2A01)
MOSFET integrated circuits containing high-voltage DMOSTs. *Pocha, Michael D., J-SC 76 Oct* 718-726 (2F01)
MOSFET integrated circuits; Mini-MSINC minicomputer circuit simulator with modular built-in model. *Young, T. K., J-SC 76 Oct* 730-732 (2F13)
Computer arithmetic; **cf.** Arithmetic
Computer peripherals
logic units; 128-bit multicomparator for performing search–sort function on arbitrary length data strings. *Mead, Carver A., J-SC 76 Oct* 692-695 (2D03)
Computer pipeline arithmetic
multiplication; low-power bipolar two's complement serial pipeline multiplier chip. *Kane, Jack, J-SC 76 Oct* 669-678 (2B08)
Computer programming; **cf.** Computer software
Computer software; **cf.** Microprogramming
Conferences; **cf.** Solid-State Circuits Conference. 1st European, Canterbury, England, 1975
Contacts; **cf.** Semiconductor device metallization
Conversion; **cf.** Digital–analog conversion; Transducers
Convolution
optical CCD convolvers. *Copeland, Miles A., J-SC 76 Feb* 84-87 (1G01)
Counting circuits
CMOS/SOS counters; 22-stage high-frequency counter for watch-circuit applications. *Ipri, Alfred C., J-SC 76 Apr* 329-336 (2A01)
CTD; **cf.** Charge-transfer devices
Current dividers
precision active current splitters with high output impedance. *Barker, R. W. J., J-SC 76 Jun* 406-408 (1E03)

D

Defects; **cf.** Semiconductor defects
Delay devices
CCD delay devices; dual differential analog device for sampled data analog signal processing applications. *Sealer, David A., J-SC 76 Feb* 105-108 (2B04)
Delay lines
CCD analog delay lines using nonoverlapping gate technology. *Browne, V. A., J-SC 76 Feb* 203-207 (3C05)
MTI radar; delay line cancellers using charge-transfer devices. *Butler, Walter J., J-SC 76 Feb* 93-100 (2A06)
Dielectric breakdown
single crystal Si–SiO_2–polycrystalline Si structures; dielectric field strength degradation *Mattauch, R J., J-SC 76 Oct* 732-735 (2G01)
Differential amplifiers
common-mode rejection ratio limitations of differential pair and differential cascode amplifiers. *Jaeger, Richard C., J-SC 76 Jun* 411-417 (1E08)
offset voltage and common-mode rejection ratio of bipolar amplifiers. *Jaeger, Richard C., J-SC 76 Aug* 557-561 (2C11)
Digital–analog conversion
current-switch digital–analog converters: circuit techniques for reducing current gain mismatch and second-quad errors, and eliminating V_{BE} grading. *Schulz, Raymond A., J-SC 76 Apr* 338-341 (2A10)
high-accuracy monolithic converters using dynamic element matching. *van de Plassche, Rudy J., J-SC 76 Dec* 795-800 (1E04)
monolithic bipolar 10-bit converters, passive laser trimming *Price, John J., J-SC 76 Dec* 789-794 (1D12)
multipliers: charge-transfer multiplying digital–analog converter. *Albarrán, Jose F., J-SC 76 Dec* 772-779 (1C09)
Digital communication; **cf.** PCM; PPM
Digital filters; **cf.** Recursive digital filters; Sampled-data filters
Digital integrated circuits; **cf.** Bipolar integrated circuits; CMOSFET integrated circuits; MOSFET integrated circuits; Semiconductor logic circuits; Semiconductor memories
Diodes; **cf.** Semiconductor diodes
Discrete Fourier transforms
transversal filters; 500-stage CCD filter for spectral analysis. *Brodersen, Robert W., J-SC 76 Feb* 75-84 (1F06)
Discrete-time filters; **cf.** Sampled-data filters
Distributed filters; **cf.** Transversal filters
Doping; **cf.** Semiconductor doping
Doppler measurements
ultrasonic blood flow measurement; micropower integrated circuits for implantable bidirectional flowmeter. *Frescura, Bert L., J-SC 76 Dec* 817-825 (1F12)
Doppler radar
filter banks, reprogrammable CCD recursive filter bank. *Mattern, John, J-SC 76 Feb* 88-93 (2A01)
Doppler radar, pulse
signal processing charge-coupled device and surface acoustic wave techniques. *Roberts, J. B. G., J-SC 76 Feb* 100-104 (2A13)

E

ECM; **cf.** Electronic countermeasures
Electric variables measurement; **cf.** Power measurement; Semiconductor device measurements
Electric variables transducers; **cf.** Voltage transducers
Electron-beam applications; **cf.** Semiconductor device fabrication
Electron carriers; **cf.** Charge-carrier processes
Electronic countermeasures; **cf.** Radar jamming
Electrostatics
CCD potential profiles; calculation using Green's function techniques. *Schechter, Daniel, J-SC 76 Feb* 225-228 (3D13)
Electrothermal integrated circuits
design; computer simulation of integrated circuits in presence of electrothermal interaction. *Fukahori, Kiyoshi, J-SC 76 Dec* 834-846 (2A09)

F

Fabrication; **cf.** Integrated-circuit fabrication; Semiconductor device fabrication
Feedforward amplifiers
high-power 2.2 GHz amplifier using thin-film hybrid-circuit technology. *Hsieh, Chi-Chia, J-SC 76 Apr* 271-278 (1C04)
FETs; **cf.** JFETs; Microwave FETs; Microwave transistors; MOSFETs; Power transistors; Schottky-barrier FETs
FET
abbr. of Field-effect transistor
FET amplifiers; **cf.** Microwave FET amplifiers; Power transistors
FET circuits
current dividers; precision active current splitters with high output impedance. *Barker, R. W. J., J-SC 76 Jun* 406-408 (1E03)
FET integrated circuits; **cf.** Bipolar–FET integrated circuits; MOSFET integrated circuits
FET integrated circuits, logic
Si MESFET logic circuits; subnanosecond low-power gate for LSI. *Nuzillat, Gérard, J-SC 76 Jun* 385-394 (1C10)
FET integrated circuits, memory
MNOS FET memories; nonvolatile optical memory for operation in visible and infrared regions. *Koike, Susumu, J-SC 76 Apr* 303-307 (1E08)
FET integrated circuits, memory; **cf.** JFET integrated circuits; MOSFET integrated circuits
Field-effect transistors; **cf.** FETs
Filters; **cf.** Active filters; Bandpass filters; Digital filters, Low-pass filters; Radar signal processing; Transversal filters
Flow; **cf.** Fluid flow
Fluid flow; **cf.** Liquid flow
Fourier transforms; **cf.** Discrete Fourier transforms
Frequency conversion
frequency doublers; integrable doubler for sinusoidal signals. *Ashok, S., J-SC 76 Apr* 341-343 (2A13)
Frequency multiplication; **cf.** Frequency conversion
Frequency synthesizers
TV receiver tuners; frequency synthesized digital tuning system for UHF/VHF receivers. *Wu, W. John, J-SC 76 Jun* 420-422 (1F03)
Function generators; **cf.** Waveform generators

H

Heat; **cf.** Thermal
Hole carriers; **cf.** Charge-carrier processes
Hybrid integrated circuits
feedforward amplifiers; 2.2 GHz high-power amplifier. *Hsieh, Chi-Chia, J-SC 76 Apr* 271-278 (1C04)

I

IC; **cf.** Integrated circuits
IGFETs: **cf.** MOSFETs
Image sensors; **cf.** Charge-coupled image sensors; Charge-injection image sensors; Infrared image sensors
IMPATT diode oscillators
millimeter-wave pulsed oscillators for use at 35, 94, and 140 GHz. *Ying, Robert S., J-SC 76 Apr* 279-285 (1C12)
Implantable devices
bidirectional blood flowmeters using micropower integrated circuits. *Frescura, Bert L., J-SC 76 Dec* 817-825 (1F12)
Inductance
semiconductor inductance obtained by impedance conversion method; use in wideband variable tuning circuits with constant *Q*. *Watanabe, Akira, J-SC 76 Apr* 307-312 (1E12)
Infrared(0.70–100 μm); **cf.** Submillimeter-wave (300–3000 GHz)
Infrared image sensors
charge-coupled imaging array using Schottky-barrier detectors. *Kohn, Elliott S., J-SC 76 Feb* 139-146 (2D10)
Infrared radio communication
TV receiver infrared remote control; PPM transmission system for color TV receivers. *Casier, Herman J., J-SC 76 Dec* 801-808 (1E10)
Insulation breakdown, **cf.** Dielectric breakdown
Integrated circuits; **cf.** Analog integrated circuits; Bipolar integrated circuits; Charge-coupled devices; Charge-transfer devices; CMOSFET integrated circuits; Electrothermal integrated circuits; FET integrated circuits; Hybrid integrated circuits; MOSFET integrated circuits; Semiconductor logic circuits; Semiconductor memories
Integrated-circuit design: **cf.** Computer applications, integrated-circuit design
Integrated-circuit fabrication
bipolar logic circuits; high-speed integrated injection logic circuit. *Mulder, Cor, J-SC 76 Jun* 379-385 (1C04)
CMOSFET integrated circuits; double-diffused technology. *Masuhara, Toshiaki, J-SC 76 Aug* 453-458 (1B12)
CMOSFET integrated circuits; process technology for radiation-hardened circuits. *Dawes, William R., Jr., J-SC 76 Aug* 459-465 (1C04)
CMOS/SOS circuits; fabrication using deep-depletion-process technology. *Ipri, Alfred C., J-SC 76 Apr* 329-336 (2A01)

special issue on technology and processing, *J-SC 76 Aug* 430-518 (1A03)
special issue on technology and processing; foreword. *Gregory, B. L., Guest ed., J-SC 76 Aug* 430 (1A03)
Integrated-circuit fabrication; **cf.** Ion implantation
Integrated-circuit interconnections; **cf.** Integrated-circuit metallization
Integrated-circuit layout
bipolar logic circuits; high-speed integrated injection logic circuit with simplified layout. *Mulder, Cor, J-SC 76 Jun* 379-385 (1C04)
Integrated-circuit metallization
lift-off technique for realizing interconnections in circuits with high packing density. *Widmann, Dietrich W., J-SC 76 Aug* 466-471 (1C11)
Integrated-circuit modeling
bipolar integrated circuits; integrated injection logic macromodel including lateral and current redistribution effects. *Estreich, Donald B., J-SC 76 Oct* 648-657 (2A01)
comparators; macromodel. *Getreu, Ian E., J-SC 76 Dec* 826-833 (2A01)
Integrated-circuit thermal factors; **cf.** Semiconductor device thermal factors
Integrated injection logic; **cf.** Bipolar integrated circuits, logic
Integrating circuits
inverting integrators; high-frequency small-signal response. *Allen, Phillip E., J-SC 76 Aug* 545-547 (2B13)
Interconnections; **cf.** Integrated-circuit metallization
Ion implantation
bipolar transistors; fabrication of super-gain transistors for integrated circuits. *Gegg, Winifred M., J-SC 76 Aug* 485-491 (1E02)
bipolar transistors; integrated high-frequency transistors with As-implanted polysil emitters. *Graul, Jürgen, J-SC 76 Aug* 491-495 (1E08)

J

Jamming; **cf.** Radar jamming
JFETs
fabrication of p-channel JFETs using borsenic process. *Saraswat, Krishna C., J-SC 76 Aug* 495-500 (1E12)
negative resistance; theory of voltage-controlled negative resistance. *Mizuno, Hiroyuki, J-SC 76 Apr* 313-317 (1F04)
vertical channel JFETs; high-power and high-frequency FETs fabricated using Si planar technology. *Ozawa, Osamu, J-SC 76 Aug* 511-518 (1F14)
JFET
abbr. of Junction field-effect transistor
JFET integrated circuits, memory
random-access memories; multilevel or analog memory using one transistor per cell. *Heald, Raymond A., J-SC 76 Aug* 519-528 (2A01)
Josephson device logic circuits
distributed Josephson tunneling logic circuits. *Schlig, Eugene S., J-SC 76 Jun* 424-426 (1F07)
Junction FETs; **cf.** JFETs

L

Large-scale integration; **cf.** Digital integrated circuits
Laser applications, materials processing
digital–analog converters; passive laser trimming of 10-bit monolithic bipolar converter. *Price, John J., J-SC 76 Dec* 789-794 (1D12)
read-only memories; laser coding of bipolar memories. *North, James C., J-SC 76 Aug* 500-505 (1F03)
temperature transducers; two-terminal transducer fabricated using laser trimmed thin-film-on-Si technology. *Timko, Michael P., J-SC 76 Dec* 784-788 (1D07)
Laser materials-processing applications; **cf.** Laser applications, materials processing
Lateral devices
bipolar transistors; fabrication of lateral p-n-p transistor using borsenic process. *Saraswat, Krishna C., J-SC 76 Aug* 495-500 (1E12)
Layout; **cf.** Integrated-circuit layout
Linear integrated circuits; **cf.** Analog integrated circuits
Liquid flow measurement; **cf.** Blood flow measurement
Logic circuits; **cf.** Digital integrated circuits; Josephson device logic circuits; Semiconductor logic circuits
Low-pass filters
biquad derived structure realization. *Brodie, J. H., J-SC 76 Aug* 552-555 (2C06)
LSI; **cf.** Digital integrated circuits

M

Materials processing; **cf.** Laser applications
Measurement; **cf.** Electric variables measurement; Semiconductor device measurements; Thermal variables measurement; Time measurement
Memories; **cf.** Analog memories; Optical memories; Random-access memories; Read-only memories; Semiconductor memories
MESFETs; **cf.** Schottky-barrier FETs
Metallization; **cf.** Integrated-circuit metallization; Semiconductor device metallization
Metal-nitride-oxide-semiconductor; **cf.** MNOS
Metal-oxide-semiconductor; **cf.** MOS
Metal-semiconductor devices; **cf.** Schottky-barrier devices
Microprogramming
sequences using isoplanar integrated-injection logic. *Crippen, Richard E., J-SC 76 Oct* 662-668 (2B01)
Microwave(3–30 GHz); **cf.** Millimeter-wave (30–300 GHz); UHF (300–3000 MHz)
Microwave amplifiers; **cf.** Microwave bipolar transistor amplifiers; Microwave FET amplifiers
Microwave bipolar transistors
mounting and interconnection improvements. *Belohoubek, Erwin F., J-SC 76 Apr* 256-263 (1B03)
Microwave bipolar transistor amplifiers
linearized class-*B* amplifiers. *Sechi, Franco N., J-SC 76 Apr* 264-270 (1B11)
Microwave circuits
special issue, *J-SC 76 Apr* 242-302 (1A03)
special issue foreword. *Frey, Jeffrey, Guest ed., J-SC 76 Apr* 242 (1A03)
Microwave FET amplifiers
GaAs Schottky-barrier FET amplifiers; noise. *Pucel, Robert A., J-SC 76 Apr* 243-255 (1A04)
linearized class-*B* amplifiers. *Sechi, Franco N., J-SC 76 Apr* 264-270 (1B11)
Microwave oscillators; **cf.** IMPATT diode oscillators
Microwave transistors; **cf.** Microwave bipolar transistors; Microwave FETs
Millimeter-wave(30–300 GHz); **cf.** Microwave (3–30 GHz)
Millimeter-wave oscillators
IMPATT diode oscillators; pulsed oscillator for 35, 94, and 140 GHz. *Ying, Robert S., J-SC 76 Apr* 279-285 (1C12)
Minicomputers
16-bit LSI minicomputer using N-channel MOS technology. *Yoshida, Kenji, J-SC 76 Oct* 696-702 (2D07)
Minicomputer applications
integrated-circuit design; Mini-MSINC minicomputer circuit simulator with modular built-in model. *Young, T. K., J-SC 76 Oct* 730-732 (2F13)
MNOS
abbr. of Metal-nitride-oxide-semiconductor
MNOS memories
charge-addressed memories; 16-kbit read/write nonvolatile memory. *Fagan, John L., J-SC 76 Oct* 631-636 (1E12)
on-chip high-voltage generation using improved voltage multiplier technique. *Dickson, John F., J-SC 76 Jun* 374-378 (1B13)
optical memories; electrically erasable nonvolatile MNOS FET memory for operation in visible and infrared regions. *Koike, Susumu, J-SC 76 Apr* 303-307 (1E08)
RAMs; block-oriented memory using 2-kbit MNOS memory array. *Lodi, Robert J., J-SC 76 Oct* 622-630 (1E03)
serial memories; 9216-bit NMOS/CCD memory organized as 1024 words by 9 bits. *Varshney, Ramesh C., J-SC 76 Feb* 18-24 (1B05)
Modeling; **cf.** Integrated-circuit modeling; Semiconductor device modeling
MOS
abbr. of Metal-oxide-semiconductor
MOS devices; **cf.** Charge-coupled devices; Charge-injection devices; Charge-transfer devices
MOSFETs
SOS MOSFETs; fabrication and performance of high-voltage devices. *Ronen, Ram S., J-SC 76 Aug* 431-442 (1A04)
MOSFETs; **cf.** CMOSFETs
MOSFET integrated circuits, memory
RAMs; 16-kbit single-transistor cell memory with read access time of 200 ns. *Itoh, Kiyoo, J-SC 76 Oct* 585-590 (1B08)
MOSFET integrated circuits
analog-to-digital converters; slope-type converter. *Smarandoiu, G., J-SC 76 Jun* 408-410 (1E05)
computer-aided design of circuits containing high-voltage DMOSTs. *Pocha, Michael D., J-SC 76 Oct* 718-726 (2F01)
computer-aided design; Mini-MSINC minicomputer circuit simulator with modular built-in model. *Young, T. K., J-SC 76 Oct* 730-732 (2F13)
DMOS integrated circuits; optimum load device. *Lin, Hung Chang, J-SC 76 Aug* 443-452 (1B02)
single crystal Si–SiO_2–polycrystalline Si structures; dielectric field strength degradation. *Mattauch, R. J., J-SC 76 Oct* 732-735 (2G01)
MOSFET integrated circuits; **cf.** CMOSFET integrated circuits
MOSFET integrated circuits, analog
operational amplifiers; internally compensated amplifier using NMOS technology. *Tsividis, Yannis P., J-SC 76 Dec* 748-753 (1A13)
speech coders; segmented μ-255 law PCM coder using NMOS technology. *Tsividis, Yannis P., J-SC 76 Dec* 740-747 (1A05)
TV receiver ultrasonic–infrared remote control; PPM receiver for color TV receivers. *Casier, Herman J., J-SC 76 Dec* 801-808 (1E10)
MOSFET integrated circuits, digital
minicomputers using N-channel MOS technology. *Yoshida, Kenji, J-SC 76 Oct* 696-702 (2D07)
MOSFET integrated circuits, logic
multicomparators; 128-bit comparator for performing search–sort function or arbitrary length data strings. *Mead, Carver A., J-SC 76 Oct* 692-695 (2D03)
programmable logic arrays; high-speed array using ESFI SOS technology. *Hebenstreit, Ernst, J-SC 76 Jun* 370-374 (1B09)
MOSFET integrated circuits, logic; **cf.** CMOSFET integrated circuits
MOSFET integrated circuits, memory
low-power 2048-bit read/write memory chip. *Remshardt, Rolf, J-SC 76 Jun* 352-359 (1A05)
RAMs; 16-kbit dynamic TTL-compatible memory. *Ahlquist, C. Norman, J-SC 76 Oct* 570-574 (1A07)
RAMs; 4K 5-V static memories. *Schlageter, Jeffrey M., J-SC 76 Oct* 602-609 (1C11)
RAMs; continuously charge-coupled memory. *Hoffmann, Kurt, J-SC 76 Oct* 591-596 (1B14)
ROMs; 16-bit V-groove static memory. *Rodgers, T. J., J-SC 76 Oct* 614-622 (1D09)
ROMs; minimum size structure compatible with Si-gate enhancement/depletion mode MOSFET LSI. *Kawagoe, Hiroto, J-SC 76 Jun* 360-364 (1A13)
MOSFET integrated circuits, memory; **cf.** CMOSFET integrated circuits
Moving target indicators; **cf.** MTI
MTI radar
delay line cancellers using charge-transfer devices. *Butler, Walter J., J-SC 76 Feb* 93-100 (2A06)
Multiplexing
analog memory input circuits; CCD edge-triggered circuit. *White, B. J., J-SC 76 Feb* 231-232 (3E05)
Multiplication
serial pipeline multipliers; low-power bipolar two's complement multiplier chip. *Kane, Jack, J-SC 76 Oct* 669-678 (2B08)
Multipliers
digital–analog converters; charge-transfer multiplying converter *Albarrán, Jose F., J-SC 76 Dec* 772-779 (1C09)
three-gating stage 4×4 multiplier using modular single-stage universal logic gate. *Gaskill, James R., Jr., J-SC 76 Aug* 539-544 (2B07)
Multipliers; **cf.** Voltage multipliers

Multivibrators
voltage–frequency converters; highly linear converter using precise monolithic multivibrator. *Gilbert, Barrie. J-SC 76 Dec* 852-864 (2B13)

N

Negative-resistance devices
JFETs; theory of voltage-controlled negative resistance. *Mizuno, Hiroyuki, J-SC 76 Apr* 313-317 (1F04)
Networks; cf. Active networks; Nonlinear networks; Resistive networks
Network analysis; cf. Networks
Noise; cf. Amplifier noise; Semiconductor device noise
Nonlinear networks
resistive networks; analysis considering effect of temperature. *Nemeth, K., J-SC 76 Aug* 550-552 (2C04)

O

Operational amplifiers
integrated NMOS amplifier with internal compensation. *Tsividis, Yannis P., J-SC 76 Dec* 748-753 (1A13)
monolithic amplifier with large bandwidth and high output current. *Huijsing, Johan H., J-SC 76 Apr* 323-328 (1F14)
Optical communication; cf. Optical radio communication
Optical memories
MNOS FET memories; nonvolatile memory for operation in visible and infrared regions. *Koike, Susumu, J-SC 76 Apr* 303-307 (1E08)
Optical radio communication; cf. Infrared radio communication
Oscillators
wide-tunable, integrated sine oscillators. *Doorenbosch, Frank, J-SC 76 Jun* 401-403 (1D12)
Oscillators; cf. Microwave oscillators; Millimeter-wave oscillators

P

PCM
abbr. of Pulse-code modulation
PCM communication
speech coders; segmented μ-255 law PCM coder using NMOS technology. *Tsividis, Yannis P., J-SC 76 Dec* 740-747 (1A05)
Peripheral equipment; cf. Computer peripherals
p-i-n diodes
high-power diodes; current and voltage waveforms for reverse-bias switching. *Georgopoulos, Chris J., J-SC 76 Apr* 286-295 (1D05)
high-power diodes; current and voltage waveforms for forward-bias switching. *Georgopoulos, Chris J., J-SC 76 Apr* 295-302 (1D14)
Power amplifiers; cf. Power transistors
Power measurement
sinusoidal frequency doublers. *Ashok, S., J-SC 76 Apr* 341-343 (2A13)
Power semiconductor devices
p-i-n diodes; current and voltage waveforms for reverse-bias switching high-power diodes. *Georgopoulos, Chris J., J-SC 76 Apr* 286-295 (1D05)
p-i-n diodes; current and voltage waveforms for forward-bias switching high-power diodes. *Georgopoulos, Chris J., J-SC 76 Apr* 295-302 (1D14)
Power semiconductor devices; cf. Power transistors
Power spectra; cf. Spectral...
Power transistors, bipolar
microwave transistors; mounting and interconnection improvements. *Belohoubek, Erwin F., J-SC 76 Apr* 256-263 (1B03)
Power transistors, bipolar amplifiers
instabilities in RF-power amplifiers caused by self-oscillation in transistor bias network. *Vidkjaer, Jens, J-SC 76 Oct* 703-712 (2D14)
microwave amplifiers, linearized class-*B* amplifier. *Sechi, Franco N., J-SC 76 Apr* 264-270 (1B11)
RF power amplifiers with saturated power output transistor; transistor storage time. *Sokal, Nathan O., J-SC 76 Apr* 344-346 (2B02)
$V_{CE(sat)}$ of RF transistors and waveform details near $V_{CE(sat)}$; measurement. *Sokal, Nathan O., J-SC 76 Aug* 555-557 (2C09)
Power transistors, FET
JFETs; vertical channel FET fabricated using Si planar technology. *Ozawa, Osamu, J-SC 76 Aug* 511-518 (1F14)
MOSFETs with vertical drain electrode and meshed gate structure; maximum power of 200 W in 5×5 mm² chip. *Yoshida, Isao, J-SC 76 Aug* 472-477 (1D03)
Power transistors, FET amplifiers
microwave amplifiers; linearized class-*B* amplifier. *Sechi, Franco N., J-SC 76 Apr* 264-270 (1B11)
PPM
abbr. of Pulse-position modulation
PPM communication
TV receiver remote control; PPM infrared–ultrasonic transmission system for color TV receivers. *Casier, Herman J., J-SC 76 Dec* 801-808 (1E10)
Pulse-code modulation; cf. PCM
Pulse modulation; cf. PCM; PPM
Pulse radar; cf. Doppler radar

R

Radar; cf. MTI radar
Radar jamming
ECM memories; charge-transfer analog memory. *Butler, Walter J., J-SC 76 Feb* 93-100 (2A06)
Radar signal processing
Doppler radar; reprogrammable recursive filter bank using CCD discrete analog-signal processing. *Mattern, John, J-SC 76 Feb* 88-93 (2A01)
pulse Doppler radar: signal processing using charge-coupled device and surface acoustic wave techniques. *Roberts, J. B. G., J-SC 76 Feb* 100-104 (2A13)
Radar signal processing; cf. MTI radar
Radar target recognition
Doppler radar; reprogrammable recursive filter bank using CCD discrete analog-signal processing. *Mattern, John, J-SC 76 Feb* 88-93 (2A01)
Radiation hardening; cf. Radiation protection
Radiation protection; cf. Semiconductor device radiation protection
Radio communication; cf. Optical radio communication
Radio receivers; cf. TV receivers
RAM; cf. Random-access memories
Random-access memories
block-oriented memory using 2-kbit MNOS memory array. *Lodi, Robert J., J-SC 76 Oct* 622-630 (1E03)
charge-coupled memory cell. *Tasch, Al F., Jr., J-SC 76 Feb* 58-63 (1E03)
charge-coupled memory cells; charge capacity analysis. *Tasch, Al F., Jr., J-SC 76 Oct* 575-585 (1A12)
CMOSFET memories: monostable memory with self-refresh mode. *Shiga, Kazumasa, J-SC 76 Oct* 609-613 (1D04)
continuously charge-coupled memories. *Hoffmann, Kurt, J-SC 76 Oct* 591-596 (1B14)
JFET memories; multilevel or analog memory using one transistor per cell. *Heald, Raymond A., J-SC 76 Aug* 519-528 (2A01)
MOSFET memories: 16-kbit dynamic TTL-compatible memory. *Ahlquist, C. Norman, J-SC 76 Oct* 570-574 (1A07)
MOSFET memories; 16-kbit single-transistor cell memory with read access time of 200 ns. *Itoh, Kiyoo, J-SC 76 Oct* 585-590 (1B08)
MOSFET memories; 4K 5-V static memories. *Schlageter, Jeffrey M., J-SC 76 Oct* 602-609 (1C11)
one-device cell memory arrays; balanced charge-transfer sense amplifier. *Heller, Lawrence G., J-SC 76 Oct* 596-601 (1C05)
Read-only memories
laser coding of bipolar memories. *North, James C., J-SC 76 Aug* 500-505 (1F03)
MOSFET memories; minimum size ROM structure compatible with Si-gate enhancement/depletion mode MOSFET LSI. *Kawagoe, Hiroto, J-SC 76 Jun* 360-364 (1A13)
MOSFET memories; V-groove 16-kbit static memory. *Rodgers, T. J., J-SC 76 Oct* 614-622 (1D09)
Receivers; cf. Radio receivers
Recursive digital filters
CCD recursive filter bank for Doppler radar applications. *Mattern, John, J-SC 76 Feb* 88-93 (2A01)
CTD filters; effects of charge transfer inefficiency on multiplexed filters. *Gersho, Allen, J-SC 76 Feb* 214-219 (3D08)
Resistive networks
nonlinear networks; analysis considering effect of temperature. *Nemeth, K., J-SC 76 Aug* 550-552 (2C04)
ROM; cf. Read-only memories

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Sampled-data filters
CCD recursive filter bank for Doppler radar applications. *Mattern, John, J-SC 76 Feb* 88-93 (2A01)
CTD filters; effects of charge transfer inefficiency on multiplexed recursive filters. *Gersho, Allen, J-SC 76 Feb* 214-219 (3D08)
Schottky-barrier devices
image sensors: charge-coupled infrared array using Schottky-barrier detectors. *Kohn, Elliott S., J-SC 76 Feb* 139-146 (2D10)
Schottky-barrier FETs
Si MESFET logic circuits; subnanosecond low-power gate for LSI. *Nuzillat, Gérard, J-SC 76 Jun* 385-394 (1C10)
Schottky-barrier FETs; cf. Microwave FETs
Semiconductor charge carriers; cf. Charge-carrier processes
Semiconductor defects
bipolar transistors; pipes causing emitter–collector shorts in integrated circuits. *Barson, Fred, J-SC 76 Aug* 505-510 (1F08)
bulk traps in bulk CCDs; effects on charge-transfer inefficiency. *Collet, M. G., J-SC 76 Feb* 156-159 (2E13)
Semiconductor devices
inductance obtained by impedance conversion method; use in wideband variable tuning circuits with constant *Q*. *Watanabe, Akira, J-SC 76 Apr* 307-312 (1E12)
Semiconductor devices; cf. Integrated circuits; Power semiconductor devices; Semiconductor diodes; Transistors
Semiconductor device contacts; cf. Semiconductor device metallization
Semiconductor device fabrication
CCDs; charge-transfer inefficiency in electron-beam fabricated conductively connected devices. *Krambeck, R. H., J-SC 76 Feb* 171-180 (3A01)
CCDs; nonoverlapping gate technology. *Browne, V. A., J-SC 76 Feb* 203-207 (3C05)
CCDs; three-phase devices using three polysilicon levels and SiO_2–Si_3N_4 gate insulator. *Declerck, Gilbert J., J-SC 76 Feb* 229-231 (3E03)
CCDs; two-phase and uniphase electrode structures. *Mohsen, Amr M., J-SC 76 Feb* 180-188 (3A10)
I²L devices compatible with linear integrated circuits. *Saltich, Jack L., J-SC 76 Aug* 478-485 (1D09)
JFETs; fabrication of vertical channel FET using Si planar technology. *Ozawa, Osamu, J-SC 76 Aug* 511-518 (1F14)
MOSFETs; fabrication and performance of high-voltage SOS MOSFETs. *Ronen, Ram S., J-SC 76 Aug* 431-442 (1A04)
special issue on technology and processing, *J-SC 76 Aug* 430-518 (1A03)
special issue on technology and processing; foreword. *Gregory, B. L., Guest ed., J-SC 76 Aug* 430 (1A03)
Semiconductor device fabrication; cf. Integrated-circuit fabrication; Ion implantation; Semiconductor device metallization; Semiconductor doping
Semiconductor device measurements
bipolar transistors; error minimization in measurement of emitter and collector resistances. *Choma, John, Jr., J-SC 76 Apr* 318-322 (1F09)
bipolar transistors; emitter and collector resistances in integrated structure. *Huang, J. S. T., J-SC 76 Apr* 343-344 (2B01)
power transistors; $V_{CE(sat)}$ of RF transistors and waveform details near $V_{CE(sat)}$. *Sokal, Nathan O., J-SC 76 Aug* 555-557 (2C09)
UHF power transistors; transistor storage time. *Sokal, Nathan O., J-SC 76 Apr* 344-346 (2B02)
Semiconductor device metallization
charge-injection device imagers; transparent metal oxide electrode imager. *Brown, Dale M., J-SC 76 Feb* 128-132 (2C13)

microwave bipolar power transistors; mounting and interconnection improvements. *Belohoubek, Erwin F., J-SC 76 Apr* 256-263 (1B03)

Semiconductor device modeling
bipolar transistors; common-emitter short-circuit gain-bandwidth product of transistors operated in high-injection regime. *Choma, John, Jr., J-SC 76 Apr* 346-348 (2B04)
bipolar transistors; two-lump model for computer circuit simulation. *Divekar, D. A., J-SC 76 Oct* 726-730 (1F09)
DMOSTs; two-component MOSFET–resistor model of high-voltage transistor. *Pocha, Michael D., J-SC 76 Oct* 718-726 (2F01)
surface channel devices; model for charge transport. *Scott, D. B., J-SC 76 Jun* 422-424 (1F05)

Semiconductor device modeling; cf. Integrated-circuit modeling

Semiconductor device noise
CCD shift registers. *Brodersen, Robert W., J-SC 76 Feb* 147-155 (2E04)
GaAs FETs. *Pucel, Robert A., J-SC 76 Apr* 243-255 (1A04)
voltage references; integrated bandgap reference with improved noise performance. *Meijer, Gerard C. M., J-SC 76 Jun* 403-406 (1D14)

Semiconductor device radiation protection
CMOSFET integrated circuits; process technology. *Dawes, William R., Jr., J-SC 76 Aug* 459-465 (1C04)

Semiconductor device thermal factors
CCDs; charge-transfer inefficiency as function of temperature in bulk devices. *Collet, M. G., J-SC 76 Feb* 156-159 (2E13)
integrated circuits; computer simulation of circuits in presence of electrothermal interaction. *Fukahori, Kiyoshi, J-SC 76 Dec* 834-846 (2A09)
nonlinear resistive networks; analysis considering effect of temperature. *Nemeth, K., J-SC 76 Aug* 550-552 (2C04)
voltage references; integrated bandgap reference with improved temperature performance. *Meijer, Gerard C. M., J-SC 76 Jun* 403-406 (1D14)

Semiconductor diodes; cf. IMPATT diodes; p-i-n diodes

Semiconductor diode switches
p-i-n diodes; current and voltage waveforms for reverse-bias switching high-power diodes. *Georgopoulos, Chris J., J-SC 76 Apr* 286-295 (1D05)
p-i-n diodes; current and voltage waveforms for forward-bias switching high-power diodes. *Georgopoulos, Chris J., J-SC 76 Apr* 295-302 (1D14)

Semiconductor doping
bipolar transistors and JFETs; fabrication using borsenic process. *Saraswat, Krishna C., J-SC 76 Aug* 495-500 (1E12)

Semiconductor logic circuits
figure of merit; minimum energy per logic operation as figure of merit for comparison of different inverter circuit types. *Müller, Rüdiger, J-SC 76 Oct* 657-661 (2A10)
special issue on semiconductor memory and logic, *J-SC 76 Oct* 566-702 (1A03)
special issue on semiconductor memory and logic; foreword. *Murphy, B. T., Guest ed., J-SC 76 Oct* 568-569 (1A05)

Semiconductor logic circuits; cf. Bipolar integrated circuits; CMOSFET integrated circuits; Digital integrated circuits; FET integrated circuits; MOSFET integrated circuits

Semiconductor materials; cf. MNOS; MOS

Semiconductor memories
special issue on semiconductor memory and logic, *J-SC 76 Oct* 566-702 (1A03)
special issue on semiconductor memory and logic; foreword. *Vadasz, Leslie L., Guest ed., J-SC 76 Oct* 566-567 (1A03)

Semiconductor memories; cf. Bipolar integrated circuits; Charge-coupled memories; FET integrated circuits; MNOS memories; MOSFET integrated circuits

Semiconductor noise; cf. Semiconductor device noise

Semiconductor switches; cf. Bipolar transistor switches; CMOSFET switches; Semiconductor diode switches

Sense amplifiers; cf. Charge-transfer devices

Sensors; cf. Transducers

Shift registers
CMOS/SOS semi-static registers. *Ipri, Alfred C., J-SC 76 Apr* 337-338 (2A09)

Shift registers; cf. Charge-transfer devices

Signal processing
analog signal processing with charge-transfer devices. *Whitehouse, Harper J., J-SC 76 Feb* 64-65 (1E09)
analog-signal processing techniques for CCDs. *Hense, Karl R., J-SC 76 Feb* 197-202 (3B13)
sampled data analog signal processing; dual differential charge-coupled analog delay device. *Sealer, David A., J-SC 76 Feb* 105-108 (2B04)

Signal processing; cf. Radar signal processing

Silicon devices
capacitors; field strength degradation in Si–SiO_2–polycrystalline Si structures. *Mattauch, R. J., J-SC 76 Oct* 732-735 (2G01)
MESFET logic circuits; subnanosecond low-power gate for LSI. *Nuzillat, Gérard, J-SC 76 Jun* 385-394 (1C10)

Silicon devices; cf. Silicon-on-insulator

Silicon-on-insulator circuits
fabrication; deep-depletion-process technology for CMOS/SOS circuits. *Ipri, Alfred C., J-SC 76 Apr* 329-336 (2A01)
programmable logic arrays; high-speed MOSFET array. *Hebenstreit, Ernst, J-SC 76 Jun* 370-374 (1B09)
shift registers; CMOS/SOS semi-static registers. *Ipri, Alfred C., J-SC 76 Apr* 337-338 (2A09)

Silicon-on-insulator devices
MOSFETs; high-voltage SOS/MOS device fabrication and performance. *Ronen, Ram S., J-SC 76 Aug* 431-442 (1A04)

Silicon-on-sapphire circuits; cf. Silicon-on-insulator circuits

Silicon-on-sapphire devices; cf. Silicon-on-insulator devices

Solid-State Circuits Conference, 1st European, Canterbury, England, 1975
selected conference papers, *J-SC 76 Jun* 350-410 (1A03)
selected conference papers; foreword. *Stein, Karl-Ulrich, Assoc. ed., J-SC 76 Jun* 351 (1A04)

Solid-State Circuits Conference European, 1st, Canterbury, England, 1975
selected conference papers; introduction from conference chairman. *Robson, P. N., J-SC 76 Jun* 350 (1A03)

SOS; cf. Silicon-on-insulator

Source coding; cf. Speech coding

Special issues
analog integrated circuits, *J-SC 76 Dec* 738-864 (1A03)
charge-transfer devices; joint issue with *Transactions on Electron Devices, J-SC 76 Feb* 3-233 (1A04)
integrated-circuit fabrication; technology and processing, *J-SC 76 Aug* 430-518 (1A03)
microwave circuits, *J-SC 76 Apr* 242-302 (1A03)
semiconductor memory and logic, *J-SC 76 Oct* 566-702 (1A03)
Solid-State Circuits Conference European, 1st, Canterbury, England, 1975; conference papers, *J-SC 76 Jun* 350-410 (1A03)

Spectral analysis
transversal filters; 500-stage CCD filter for bandpass filtering and Fourier analysis. *Brodersen, Robert W., J-SC 76 Feb* 75-84 (1F06)

Spectral analyzers
acoustic surface-wave spectrum analyzers for pulse Doppler radar signal processing. *Roberts, J. B. G., J-SC 76 Feb* 100-104 (2A13)

Spectrum analyzers; cf. Spectral analyzers

Speech coding
PCM coders; segmented μ-255 law coder using NMOS technology. *Tsividis, Yannis P., J-SC 76 Dec* 740-747 (1A05)

Speech transmission; cf. Speech coding

Superconducting devices; cf. Josephson devices

Surface waves; cf. Acoustic surface waves

Switches; cf. Semiconductor switches

Switching circuits; cf. Logic circuits; Semiconductor logic circuits

Switching, communication; cf. Communication switching

T

Telephone switching
active bipolar transistor crosspoints for integrated exchanges. *Danneels, Johan M. R., J-SC 76 Jun* 394-400 (1D05)
PBX; 4 × 4 array of active bipolar transistor crosspoints. *Danneels, Johan M. R., J-SC 76 Dec* 779-783 (1D02)

Television; cf. TV

Temperature; cf. Thermal

Temperature measurement
temperature–frequency converters using monolithic voltage-frequency converter. *Gilbert, Barrie, J-SC 76 Dec* 852-864 (2B13)

Temperature transducers
integrated-circuit transducers; two-terminal calibrated current source with supply current directly proportional to absolute temperature. *Timko, Michael P., J-SC 76 Dec* 784-788 (1D07)

Thermal factors; cf. Semiconductor device thermal factors

Thermal image sensors; cf. Infrared image sensors

Thermal integrated circuits; cf. Electrothermal integrated circuits

Thermal variables measurement; cf. Temperature measurement

Thermal variables transducers; cf. Temperature transducers

Thermometers; cf. Temperature transducers

Thin-film circuits; cf. Hybrid integrated circuits; Silicon-on-insulator circuits

Time delay; cf. Delay

Time measurement
electronic watches; 22-stage high-frequency CMOS/SOS counter. *Ipri, Alfred C., J-SC 76 Apr* 329-336 (2A01)
electronic wrist watches; I^2L three-function watch chip with direct LED drive. *Tucci, Patrick A., J-SC 76 Dec* 847-851 (2B08)

Transducers; cf. Electric variables transducers; Thermal variables transducers

Transforms; cf. Fourier transforms

Transistors; cf. Bipolar transistors; FETs; Power transistors

Transistor-transistor logic; cf. Bipolar integrated circuits, logic

Transport processes; cf. Charge-carrier transport processes

Transversal filters
CCD filters; 500-stage filter for spectral analysis. *Brodersen, Robert W., J-SC 76 Feb* 75-84 (1F06)
CCD filters; analog-signal processing techniques. *Hense, Karl R., J-SC 76 Feb* 197-202 (3B13)
CCD filters using optical inputs; optical convolvers. *Copeland, Miles A., J-SC 76 Feb* 84-87 (1G01)
charge-transfer split-electrode filters. *Baertsch, Richard D., J-SC 76 Feb* 65-74 (1E10)

TTL (transistor–transistor logic); cf. Bipolar integrated circuits, logic

Tuned circuits
wideband variable tuning circuits; constant Q circuit using semiconductor inductance obtained by impedance conversion method. *Watanabe, Akira, J-SC 76 Apr* 307-312 (1E12)

Tuners; cf. TV receiver tuners

Tunneling; cf. Josephson devices

TV cameras
charge-coupled image sensor for 525-line TV format. *Séquin, Carlo H., J-SC 76 Feb* 115-121 (2B14)

TV receiver circuits
ultrasonic–infrared remote control; PPM transmission system for color TV receivers. *Casier, Herman J., J-SC 76 Dec* 801-808 (1E10)

TV receiver tuners
integrated frequency synthesized digital tuning system for UHF/VHF receivers. *Wu, W. John, J-SC 76 Jun* 420-422 (1F03)

U

UHF
abbr. of Ultra high frequency

UHF amplifiers
feedforward amplifiers; high-power 2.2 GHz amplifier using thin-film hybrid-circuit technology. *Hsieh, Chi-Chia, J-SC 76 Apr* 271-278 (1C04)

UHF bipolar transistors
power transistors; transistor storage time. *Sokal, Nathan O., J SC 76 Apr* 344-346 (2B02)

UHF devices
TV receiver tuners; frequency synthesized digital tuning system for UHF/VHF receivers. *Wu, W. John, J-SC 76 Jun* 420-422 (1F03)

Ultra-high frequency; cf. UHF

Ultrasonic; cf. Acoustic

V

Very high frequency; **cf.** VHF
VHF
abbr. of Very high frequency
VHF devices
TV receiver tuners; frequency synthesized digital tuning system for UHF/VHF receivers. *Wu, W. John, J-SC 76 Jun* 420-422 (1F03)
Voice; **cf.** Speech
Voltage control
integrated bandgap voltage references. *Meijer, Gerard C. M., J-SC 76 Jun* 403-406 (1D14)
Voltage multipliers
MNOS memories: on-chip high-voltage generation using improved voltage multiplier technique. *Dickson, John F., J-SC 76 Jun* 374-378 (1B13)
Voltage regulation; **cf.** Voltage control
Voltage transducers
voltage–frequency converters; highly linear converter using precise monolithic multivibrator. *Gilbert, Barrie, J-SC 76 Dec* 852-864 (2B13)

W

Watches; **cf.** Time measurement
Waveform generators
triangle–sine wave converters using differential pair with emitter degeneration. *Meyer, Robert G., J-SC 76 Jun* 418-420 (1F01)