

1978 Index

IEEE Transactions on Microwave Theory and Techniques

Vol. MTT-26

This index covers all items—papers, correspondence, reviews, etc.—that appeared in this periodical during 1978, and items from prior years that were commented upon or corrected in 1978. 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.

AUTHOR INDEX

A

- Abdel-Malek, Hany L.**, see Bandler, J. W.; *T-MTT* v26 n12 Dec 78 963-972 (1C13)
- Abe, Hiroyuki**, Yoichiro Takayama, Asamitsu Higashisaka and Hideo Takamizawa: A highly-stabilized low-noise GaAs FET integrated oscillator with a dielectric resonator in the C-band; *T-MTT* v26 n3 Mar 78 156-162 (1B08)
- Ahmadpanah, Majid**, see Crampagne, Raymond; *T-MTT* v26 n2 Feb 78 82-87 (1C08)
- Akaike, Masami**, see Kawasaki, Ryoji; *T-MTT* v16 n6 Jun 78 425-427 (1D05)
- Akello, Robert J.**, Brian Easter and I. M. Stephenson: Experimental measurement of microstrip transistor-package parasitic reactances; *T-MTT* v25 n5 May 77 367-372 (1B13)
- Comments, T-MTT* v26 n1 Jan 78 43 (1D03)
- Albanese, Victor J.** and Donald Kerbs: A high-power switching network for a dual mode antenna; *T-MTT* v26 n5 May 78 348-354 (1C02)
- Alexopoulos, Nicolaos G.** and Clifford M. Krowne: Characteristics of single and coupled microstrips on anisotropic substrates; *T-MTT* v26 n6 Jun 78 387-393 (1A09)
- Allen, James Lamar, Ed.**; Comments from the editor; *T-MTT* v26 n1 Jan 78 2 (1A04)
- Antich, Peter P.**, N. Tokita, J. H. Kim and E. W. Hahn: Selective heating of cutaneous human tumors at 27.12 MHz; *T-MTT* v26 n8 Aug 78 569-572 (1D13)
- Araki, Kiyomichi** and Yoshiyuki Naito: Upper bound calculations on capacitance of microstrip line using variational method and spectral domain approach; *T-MTT* v26 n7 Jul 78 506-509 (1D10)
- Atkinson, E. Ronald**: Microwave-induced hyperthermia dose definition; *T-MTT* v26 n8 Aug 78 595-598 (1F11)
- Auckland, David T.** and Roger F. Harrington: Electromagnetic transmission through a filled slit in a conducting plane of finite thickness, TE case; *T-MTT* v26 n7 Jul 78 499-505 (1D03)
- Ayasli, Y.**; Comments on 'Full-band low-loss continuous tracking circulation in K band'; *T-MTT* v26 n4 Apr 78 314 (2A01)
- Ayasli, Yalcin**, see Ayter, Sevil; *T-MTT* v26 n3 Mar 78 197-202 (1E07)
- Ayter, Sevil** and Yalcin Ayasli: The frequency behavior of stripline circulator junctions; *T-MTT* v26 n3 Mar 78 197-202 (1E07)

B

- Bahr, Alfred J.**; Nondestructive microwave evaluation of ceramics; *T-MTT* v26 n9 Sep 78 676-683 (1D08)
- Baker, Robert J.**, Vernon Smith, Theodore L. Phillips, Lawrence J. Kane and Lan H. Kobe: A system for developing microwave-induced hyperthermia in small animals; *T-MTT* v26 n8 Aug 78 541-545 (1B13)
- Bandler, J. W.**, M. R. M. Rizk and Hany L. Abdel-Malek: New results in network simulation, sensitivity and tolerance analysis for cascaded structures; *T-MTT* v26 n12 Dec 78 963-972 (1C13)
- Banerjee, Dilip Kumar**, see Neelakantaswamy, Perambur S.; *T-MTT* v26 n9 Sep 78 665-666 (1C11)

- Banks, Crawford**, see Ganguly, Achintya K.; *T-MTT* v26 n6 Jun 78 444-447 (1E10)
- Banno, Osamu**, see Chiba, Jiro; *T-MTT* v26 n6 Jun 78 439-443 (1E05)
- Baykal, Yahya Kemal**, see Hizal, Altunkan; *T-MTT* v26 n8 Aug 78 607-612 (1G09)
- Begemann, Günther**: An X-band balanced fin-line mixer; *T-MTT* v26 n12 Dec 78 1007-1011 (1G01)
- Behrens, George H., Jr.**: Cryogenically cooled C-band p-i-n diode integrated switch matrix for radio astronomy applications; *T-MTT* v26 n9 Sep 78 629-635 (1A03)
- Beneking, H.**; Comments on 'Experimental measurement of microstrip transistor package parasitic reactances'; *T-MTT* v26 n1 Jan 78 43 (1D03)
- Benevello, Olivier**, see Pompei, Dominique; *T-MTT* v26 n4 Apr 78 231-238 (1A09)
- Bernardi, Paolo**, Franco Bertolani and Vittorio Rizzoli: Frequency-domain shuttle-pulse measurement of losses and mode conversion; *T-MTT* v26 n3 Mar 78 203-209 (1E13)
- Bertolani, Franco**, see Bernardi, Paolo; *T-MTT* v26 n3 Mar 78 203-209 (1E13)
- Beyer, James B.**, see Franz, Michael; *T-MTT* v26 n11 Nov 78 861-865 (1B05)
- Bianco, Bruno**, Luigi Panini, Mauro Parodi and Sandro Ridella: Some considerations about the frequency dependence of the characteristic impedance of uniform microstrips; *T-MTT* v26 n3 Mar 78 182-185 (1D06)
- Bielec, Marian**, see Szmigielski, Stanislaw; *T-MTT* v26 n8 Aug 78 520-522 (1A06)
- Bolloch, Jean Pierre**, see Ramy, Jean-Pierre; *T-MTT* v26 n10 Oct 78 814-820 (2B06)
- Bonetti, René R.** and Phnio Tissi: Analysis of planar disk networks; *T-MTT* v26 n7 Jul 78 471-477 (1B03)
- Bosch, Fridolin** and Steven S. Cheng: Direct polar display of subnanosecond millimeter-wave switching at 300 Mbit/s; *T-MTT* v26 n1 Jan 78 24-27 (1B12)
- Bromaghin, Dan R.** and John P. Perry: A wideband linear FM ramp generator for the long-range imaging radar; *T-MTT* v26 n5 May 78 322-325 (1A04)
- Buck, Daniel C.** and Morrell L. King: Thermal stress-induced breakdown in an S-band isolator; *T-MTT* v26 n5 May 78 357-360 (1C11)
- Buckman, A. B.**: Theory of an efficient electronic phase shifter employing a multilayer dielectric-waveguide structure; *T-MTT* v25 n6 Jun 77 480-483 (1B14). *Correction, T-MTT* v26 n2 Feb 78 127 (1F11)

C

- Cain, Charles A.**, see Lai, Ping-Kwong; *T-MTT* v26 n8 Aug 78 530-534 (1B02)
- Cain, Charles A.**, see Piontek, Gerald E.; *T-MTT* v26 n8 Aug 78 535-540 (1B07)
- Cap, Ferdinand** and Rudolph Deutsch: Toroidal resonators for electromagnetic waves; *T-MTT* v26 n7 Jul 78 478-486 (1B10)
- Carlisle, Thomas P.**: X-band high-power multipactor receiver protector; *T-MTT* v26 n5 May 78 345-347 (1B13)
- Carlson, Eric R.**, Martin V. Schneider and Thomas F. McMaster: Subharmonically pumped millimeter-wave mixers; *T-MTT* v26 n10 Oct 78 706-715 (1A04)
- Caruso, Giuseppe** and Mario Sannino: Computer-aided determination of microwave two-port noise parameters; *T-MTT* v26 n9 Sep 78 639-642 (1A13)
- Caulfield, J. B.**, see Thompson, J. E.; *T-MTT* v26 n8 Aug 78 573-580 (1E03)
- Champlin, Keith S.** and Gad Eisenstein: Cutoff frequency of submillimeter Schottky-barrier diodes; *T-MTT* v26 n1 Jan 78 31-34 (1C05)
- Chang, David C.**, see Tippet, John C.; *T-MTT* v26 n11 Nov 78 876-883 (1C06)
- Chang, Yu-Wen**, see Paul, Jeffrey A.; *T-MTT* v26 n10 Oct 78 751-754 (1D07)
- Chen, Kun-Mu**, see Mousavinezhad, Seyed Hossein; *T-MTT* v26 n8 Aug 78 599-607 (1G01)
- Cheng, Steven S.**, see Bosch, Fridolin; *T-MTT* v26 n1 Jan 78 24-27 (1B12)
- Cheung, Augustine Y.**, see Robinson, J. Eugene; *T-MTT* v26 n8 Aug 78 546-549 (1C04)
- Chiba, Jiro**, Tatsuo Inaba, Yoshitomo Kuwamoto, Osamu Banno and Risaburo Sato: Radio communication in tunnels; *T-MTT* v26 n6 Jun 78 439-443 (1E05)
- Cho, A. Y.**, see Linke, R. A.; *T-MTT* v26 n12 Dec 78 935-938 (1A13)
- Chou, Chung-Kwang** and Arthur W. Guy: Effects of electromagnetic fields on isolated nerve and muscle preparations; *T-MTT* v26 n3 Mar 78 141-147 (1A07)
- Chow, Y. L.** and I. N. El-Beheri: An approximate dynamic spatial Green's function for microstriplines; *T-MTT* v26 n12 Dec 78 978-983 (1D14)
- Chramiec, Jerzy**: Subharmonically pumped Schottky diode single sideband modulator; *T-MTT* v26 n9 Sep 78 635-638 (1A09)
- Chu, Rucy-Shi** and Jin Au Kong: Modal theory of spatially periodic media; *T-MTT* v25 n1 Jan 77 18-25 (1B06). *Correction, T-MTT* v26 n3 Mar 78 216 (1F12)
- Coleman, Donald J., Jr.**, see Tserng, Hua Quen; *T-MTT* v26 n10 Oct 78 774-778 (1F02)
- Cornick, J. A. F.**, see Joshi, J. S.; *T-MTT* v26 n4 Apr 78 319-320 (2A06)
- Cory, Haim**, see Halevy, Shalom; *T-MTT* v26 n6 Jun 78 406-412 (1B14)
- Cotte, Marie-Thérèse**, see Ramy, Jean-Pierre; *T-MTT* v26 n10 Oct 78 814-820 (2B06)
- Crampagne, Raymond**, Majid Ahmadpanah and Jean-Louis Guiraud: A simple method for determining the Green's function for a large class of MIC lines having multilayered dielectric structures; *T-MTT* v26 n2 Feb 78 82-87 (1C08)
- Crowley, J. D.**, J. F. Weller and T. G. Giallorenzi: Use of attenuation and phase delay characteristics of SAW to measure air-gap height (Tech. n.); *T-MTT* v26 n2 Feb 78 134-135 (1G04)

D

- Das, B. N., see Deshpande, M. D.; *T-MTT* v26 n9 Sep 78 672-675 (1D04)
- Das, B. N., see Pandharipande, V. M.; *T-MTT* v26 n3 Mar 78 209-212 (1F05)
- De Clercq, Erik, see Szmigielski, Stanislaw; *T-MTT* v26 n8 Aug 78 520-522 (1A06)
- de Koning, J. G., R. J. Hamilton Jr. and T. L. Hierl: Full-band low-loss continuous tracking circulation in *K* band (Short p.); *T-MTT* v25 n2 Feb 77 152-155 (1F02) *Comments*, *T-MTT* v26 n4 Apr 78 314 (2A01)
- de Santis, Pietro, see Willing, Harry A.; *T-MTT* v26 n12 Dec 78 1017-1023 (2A01)
- Dekkers, Jozef J. M., see Venema, Adrian; *T-MTT* v26 n4 Apr 78 294-297 (1F02)
- deLateur, Barbara J., see Lehmann, Justus F.; *T-MTT* v26 n8 Aug 78 556-563 (1C14)
- Deshpande, M. D. and B. N. Das: Analysis of an end launcher for a circular cylindrical waveguide; *T-MTT* v26 n9 Sep 78 672-675 (1D04)
- Deshpande, M. D. and B. N. Das: Input impedance of coaxial line to circular waveguide feed; *T-MTT* v25 n11 Nov 77 954-957 (1A11). *Correction*, *T-MTT* v26 n4 Apr 78 315 (2A02)
- Deutsch, Rudolph, see Cap, Ferdinand; *T-MTT* v26 n7 Jul 78 478-486 (1B10)
- Dickinson, Richard M.: The beamed power microwave transmitting antenna; *T-MTT* v26 n5 May 78 335-340 (1B03)
- D'Inzeo, Guglielmo, Franco Giannini, Cesare M. Sodi and Roberto Sorrentino: Method of analysis and filtering properties of microwave planar networks; *T-MTT* v26 n7 Jul 78 462-471 (1A08)
- Doerbeck, Friedrich H., see Tserng, Hua Quen; *T-MTT* v26 n10 Oct 78 774-778 (1F02)
- Douville, Rene J. P. and David S. James: Experimental study of symmetric microstrip bends and their compensation; *T-MTT* v26 n3 Mar 78 175-182 (1C13)
- Ducoff, Howard S., see Lai, Ping-Kwong; *T-MTT* v26 n8 Aug 78 530-534 (1B02)
- Durney, Carl H., see Hagmann, Mark J.; *T-MTT* v26 n11 Nov 78 904-908 (1E06)

E

- East, J. R., see Iijima, Y.; *T-MTT* v26 n2 Feb 78 132-133 (1G02)
- Easter, Brian, see Akello, Robert J.; *T-MTT* v25 n5 May 77 367-372 (1B13)
- Easter, Brian, see Gupta, Chandra; *T-MTT* v26 n9 Sep 78 649-652 (1B09)
- Eastman, Lester F., see Shur, Michael S.; *T-MTT* v26 n12 Dec 78 1023-1028 (2A07)
- Eisenhart, Robert L., P. T. Greiling, Larry K. Roberts and Ralston S. Robertson: A useful equivalence for a coaxial-waveguide junction; *T-MTT* v26 n3 Mar 78 172-174 (1C10)
- Eisenstein, Gadi, see Champlin, Keith S.; *T-MTT* v26 n1 Jan 78 31-34 (1C05)
- El-Beheri, I. N., see Chow, Y. L.; *T-MTT* v26 n12 Dec 78 978-983 (1D14)
- Engen, Glenn F.: Calibrating the six-port reflectometer by means of sliding terminations; *T-MTT* v26 n12 Dec 78 951-957 (1C01)
- Englefield, Colin G., see Gupta, Ramesh K.; *T-MTT* v26 n1 Jan 78 28-30 (1C02)

F

- Felsen, Leopold B., see Santana, Carlos; *T-MTT* v26 n2 Feb 78 101-108 (1D13)
- Felsen, Leopold B., see Shin, Sang-Yung; *T-MTT* v26 n11 Nov 78 845-851 (1A03)
- Forreter, Gérard E., see Fournet-Fayas, Cristian; *T-MTT* v26 n5 May 78 360-363 (1C14)
- Fournet-Fayas, Cristian, Alain C. Priou and Gérard E. Forreter: A 50-kW CW ferrite circulator in *S* band; *T-MTT* v26 n5 May 78 360-363 (1C14)
- Franz, Michael and James B. Beyer: The traveling-wave IMPATT mode; *T-MTT* v26 n11 Nov 78 861-865 (1B05)
- Fray, Claude and Albert Papiernik: The open-ring line: A low-loss surface waveguide; *T-MTT* v26 n11 Nov 78 886-892 (1D02)
- Freibergs, Elmer, see Klohn, Kenneth L.; *T-MTT* v26 n10 Oct 78 764-773 (1E06)
- Fröhlich, H.: Coherent electric vibrations in biological systems and the cancer problem; *T-MTT* v26 n8 Aug 78 613-617 (2A01)

G

- Gandhi, Om P., see Hagmann, Mark J.; *T-MTT* v26 n11 Nov 78 904-908 (1E06)
- Ganguly, Achintya K., Denis C. Webb and Crawford Banks: Complex radiation impedance of microstrip-excited magnetostatic-surface waves; *T-MTT* v26 n6 Jun 78 444-447 (1E10)
- Gardioli, Fred E.: Comments on 'Transmission from a rectangular waveguide into half space through a rectangular aperture'; *T-MTT* v26 n9 Sep 78 690 (1E08)
- Garg, Ramesh: The effect of tolerances on microstripline and slotline performances; *T-MTT* v26 n1 Jan 78 16-19 (1B04)
- Geshiro, Masahiro, Masanori Matsuhara and Nobuaki Kumagai: Truncated parabolic-index fiber with minimum mode dispersion; *T-MTT* v26 n2 Feb 78 115-119 (1E13)
- Giallorenzi, T. G., see Crowley, J. D.; *T-MTT* v26 n2 Feb 78 134-135 (1G04)
- Giannini, Franco, see D'Inzeo, Guglielmo; *T-MTT* v26 n7 Jul 78 462-471 (1A08)
- Gibson, Maurice H. and Ian Thomson: Radiation considerations in the design of linear microwave transistor amplifiers for space applications; *T-MTT* v26 n10 Oct 78 779-788 (1F07)
- Glasser, Lance A.: An analysis of microwave de-embedding errors (Tech. n.); *T-MTT* v26 n5 May 78 379-380 (1E05)
- Glasser, Lance A. and Hermann A. Haus: Microwave mode locking at *X* band using solid-state devices; *T-MTT* v26 n2 Feb 78 62-69 (1B02)
- Gopinath, A. and Chandra Gupta: Capacitance parameters of discontinuities in microstriplines; *T-MTT* v26 n10 Oct 78 831-836 (2C09)
- Gopinath, A., see Neale, Brian M.; *T-MTT* v26 n10 Oct 78 827-831 (2C05)
- Gopinath, Anand, see Gupta, Chandra; *T-MTT* v26 n9 Sep 78 649-652 (1B09)
- Goudey, Kenneth R. and Attilio F. Sciambi Jr.: High power *X*-band monopulse tracking feed for the Lincoln Laboratory long-range imaging radar; *T-MTT* v26 n5 May 78 326-332 (1A08)
- Greiling, P. T., see Eisenhart, Robert L.; *T-MTT* v26 n3 Mar 78 172-174 (1C10)
- Greiser, John W., see Kantor, Gideon; *T-MTT* v26 n8 Aug 78 563-568 (1D07)
- Guena, Jean-Jérôme, see Ramy, Jean-Pierre; *T-MTT* v26 n10 Oct 78 814-820 (2B06)
- Guiraud, Jean-Louis, see Crampagne, Raymond; *T-MTT* v26 n2 Feb 78 82-87 (1C08)
- Gunn, M. W., see Ness, John B.; *T-MTT* v26 n11 Nov 78 894-897 (1D10)
- Gupta, Chandra, see Gopinath, A.; *T-MTT* v26 n10 Oct 78 831-836 (2C09)
- Gupta, Chandra, Brian Easter and Anand Gopinath: Some results on the end effects of microstriplines; *T-MTT* v26 n9 Sep 78 649-652 (1B09)

- Gupta, K. C., see Shamasundara, Srigiripuram D.; *T-MTT* v26 n10 Oct 78 788-794 (1G02)
- Gupta, Krishna Kumar, see Neelakantaswamy, Perambur S.; *T-MTT* v26 n9 Sep 78 665-666 (1C11)
- Gupta, Ramesh K. and Colin G. Englefield: Up-conversion in IMPATT amplifiers; *T-MTT* v26 n1 Jan 78 28-30 (1C02)
- Guy, Arthur W., see Chou, Chung-Kwang; *T-MTT* v26 n3 Mar 78 141-147 (1A07)
- Guy, Arthur W., Justus F. Lehmann, Jerry B. Stonebridge and Carrol C. Sorensen: Development of a 915-MHz direct-contact applicator for therapeutic heating of tissues; *T-MTT* v26 n8 Aug 78 550-556 (1C08)
- Guy, Arthur W., see Lehmann, Justus F.; *T-MTT* v26 n8 Aug 78 556-563 (1C14)
- Guy, Arthur W., *Guest ed*; Foreword; *T-MTT* v26 n8 Aug 78 517-518 (1A03)

H

- Haas, Robert W., see Keen, Nigel J.; *T-MTT* v26 n10 Oct 78 843-844 (2D07)
- Haddad, G. I., see Iijima, Y.; *T-MTT* v26 n2 Feb 78 132-133 (1G02)
- Hagmann, Mark J., Om P. Gandhi and Carl H. Durney: Improvement of convergence in moment-method solutions by the use of interpolants; *T-MTT* v26 n11 Nov 78 904-908 (1E06)
- Hahn, E. W., see Antich, Peter P.; *T-MTT* v26 n8 Aug 78 569-572 (1D13)
- Halevy, Shalom, Shalom Raz and Haim Cory: Bandwidth optimization by dielectric loading; *T-MTT* v26 n6 Jun 78 406-412 (1B14)
- Hamilton, R. J., Jr., see de Koning, J. G.; *T-MTT* v25 n2 Feb 77 152-155 (1F02)
- Harrington, R. F., see Mautz, J. R.; *T-MTT* v26 n1 Jan 78 44-45 (1D04)
- Harrington, Roger F., see Auckland, David T.; *T-MTT* v26 n7 Jul 78 499-505 (1D03)
- Harris, D. J., K. W. Lee and J. M. Reeves: Groove- and *H*-waveguide design and characteristics at short millimetric wavelengths; *T-MTT* v26 n12 Dec 78 998-1001 (1F06)
- Hartnagel, Hans Ludwig, see Pavlidis, Dimitrios; *T-MTT* v26 n3 Mar 78 162-169 (1B14)
- Haus, Hermann A., see Glasser, Lance A.; *T-MTT* v26 n2 Feb 78 62-69 (1B02)
- Hebert, Albert Sidney, see Itoh, Tatsuo; *T-MTT* v26 n10 Oct 78 820-827 (2B12)
- Held, Daniel N. and Anthony R. Kerr: Conversion loss and noise of microwave and millimeter-wave mixers: Part 1—Theory; *T-MTT* v26 n2 Feb 78 49-55 (1A03)
- Held, Daniel N. and Anthony R. Kerr: Conversion loss and noise of microwave and millimeter-wave mixers: Part 2—Experiment; *T-MTT* v26 n2 Feb 78 55-61 (1A09)
- Helszajn, Joseph and P. N. Walker: Operation of high peak power differential phase shift circulators at direct magnetic fields between subsidiary and main resonances; *T-MTT* v26 n9 Sep 78 653-658 (1B13)
- Helszajn, Joseph and David S. James: Planar triangular resonators with magnetic walls; *T-MTT* v26 n2 Feb 78 95-100 (1D07)
- Henry, Paul S. and Joseph T. Ruscio: A low-loss diffraction grating frequency multiplexer; *T-MTT* v26 n6 Jun 78 428-433 (1D08)
- Herbert, A. Sidney, see Itoh, Tatsuo; *T-MTT* v26 n12 Dec 78 987-991 (1E09)
- Herschberger, W. D.: Microwave transmission through normal and tumor cells; *T-MTT* v26 n8 Aug 78 618-619 (2A06)
- Hierl, T. L., see de Koning, J. G.; *T-MTT* v25 n2 Feb 77 152-155 (1F02)
- Higashisaka, Asamitsu, see Abe, Hiroyuki; *T-MTT* v26 n3 Mar 78 156-162 (1B08)
- Hirayama, Masahiro, see Takada, Tohru; *T-MTT* v26 n10 Oct 78 733-737 (1C03)
- Hizal, Altunkan and Yahya Kemal Baykal: Heat potential distribution in an inhomogeneous spherical model of a cranial structure exposed to microwaves due to loop or dipole antennas; *T-MTT* v26 n8 Aug 78 607-612 (1G09)
- Hoefler, Wolfgang J. R., see James, David S.; *T-MTT* v25 n5 May 77 392-398 (1D10)
- Horn, Robert E., see Klohn, Kenneth L.; *T-MTT* v26 n10 Oct 78 764-773 (1E06)
- Humphreys, R. F., see Venema, Adrian; *T-MTT* v26 n4 Apr 78 294-297 (1F02)
- Hunsinger, Bill J., see Panasiak, Carl M.; *T-MTT* v26 n6 Jun 78 447-450 (1E13)

I

- IEEE Microwave Theory and Techniques Society: Special issue on high-power microwaves; *T-MTT* v26 n5 May 78 321-374 (1A03)
- IEEE Microwave Theory and Techniques Society: Special issue on microwave and millimeter-wave integrated circuits; *T-MTT* v26 n10 Oct 78 705-842 (1A03)
- IEEE Microwave Theory and Techniques Society: Special issue on microwaves in medicine, with accent on the application of electromagnetics to cancer treatment; *T-MTT* v26 n8 Aug 78 517-626 (1A03)
- IEEE Microwave Theory and Techniques Society: 1978 IEEE MTT-S International Microwave Symposium; *T-MTT* v26 n12 Dec 78 925-1051 (1A03)
- Iijima, Y., J. R. East and G. I. Haddad: Solid-state devices for low-frequency Doppler detectors (Tech. n.); *T-MTT* v26 n2 Feb 78 132-133 (1G02)
- Ikeda, Masahiro, see Sakai, Jun-ichi; *T-MTT* v26 n9 Sep 78 658-665 (1C04)
- Ikeda, Mutsuo, see Okamoto, Hiroshi; *T-MTT* v26 n8 Aug 78 627-628 (2B01)
- Ikuno, Hiroyoshi: Analysis of wave propagation in inhomogeneous dielectric slab waveguides; *T-MTT* v26 n4 Apr 78 261-266 (1C11)
- Inaba, Tatsuo, see Chiba, Jiro; *T-MTT* v26 n6 Jun 78 439-443 (1E05)
- Itanami, Takao and Shuichi Shindo: Channel dropping filter for millimeter-wave integrated circuits; *T-MTT* v26 n10 Oct 78 759-764 (1E01)
- Itanami, Takao, see Shindo, Shuichi; *T-MTT* v26 n10 Oct 78 747-751 (1D03)
- Itoh, Kiyohiko, see Tatakura, Kohichi; *T-MTT* v26 n7 Jul 78 487-493 (1C05)
- Itoh, Tatsuo and Albert Sidney Hebert: A generalized spectral domain analysis for coupled suspended microstriplines with tuning septums; *T-MTT* v26 n10 Oct 78 820-827 (2B12)
- Itoh, Tatsuo: Generalized spectral domain method for multiconductor printed lines and its application to turnable suspended microstrips; *T-MTT* v26 n12 Dec 78 983-987 (1E05)
- Itoh, Tatsuo and A. Sidney Herbert: Simulation study of electronically scannable antennas and tunable filters integrated in a quasi-planar dielectric waveguide; *T-MTT* v26 n12 Dec 78 987-991 (1E09)

J

- Jablonski, Daniel: Attenuation characteristics of circular dielectric waveguide at millimeter wavelengths; *T-MTT* v26 n9 Sep 78 667-671 (1C13)
- Jacobi, John H., see Larsen, Lawrence E.; *T-MTT* v26 n8 Aug 78 581-595 (1E11)
- Jacobs, Harold, see Klohn, Kenneth L.; *T-MTT* v26 n10 Oct 78 764-773 (1E06)
- James, David S., Guy R. Panichaud and Wolfgang J. R. Hoefler: Aperture coupling

- between microstrip and resonant cavities; *T-MTT* v25 n5 May 77 392-398 (1D10)
Comments, T-MTT v26 n9 Sep 78 690-691 (1E08)
James, David S., see Douville, Rene J. P.; *T-MTT* v26 n3 Mar 78 175-182 (1C13)
James, David S., see Helszajn, Joseph; *T-MTT* v26 n2 Feb 78 95-100 (1D07)
Janiak, Marek, see Szmigielski, Stanislaw; *T-MTT* v26 n8 Aug 78 520-522 (1A06)
Jansen, Rolf H.; High-speed computation of single and coupled microstrip parameters including dispersion, high order modes, loss and finite strip thickness; *T-MTT* v26 n2 Feb 78 75-82 (1C01). *Correction, T-MTT* v26 n3 Mar 78 216 (1F12)
Jaworski, Marek; On the resonant frequency of a reentrant cylindrical cavity; *T-MTT* v26 n4 Apr 78 256-260 (1C06)
Jeng, Garbo and Alvin Wexler; Self-adjoint variational formulation of problems having non-self-adjoint operators; *T-MTT* v26 n2 Feb 78 91-94 (1D03)
Joshi, J. S. and J. A. F. Cornick; Analysis of waveguide post configurations: Part 3—Influence of general waveguide terminations (Tech. n.); *T-MTT* v26 n4 Apr 78 319-320 (2A06)
Justesen, Don R.; In remembrance of Curtis C. Johnson; *T-MTT* v26 n8 Aug 78 519 (1A05)

K

- Kajfez, Darko**, Zoja Paunovic and Stane Pavlin; Simplified design of Lange coupler; *T-MTT* v26 n10 Oct 78 806-808 (2A12)
Kalkstein, Kalman; Bound on scattering elements for irregularly shaped waveguides; *T-MTT* v26 n4 Apr 78 250-252 (1B14)
Kamihashi, Susumu, see Tajima, Yusuke; *T-MTT* v26 n10 Oct 78 795-801 (2A01)
Kamiya, Toshiaki, see Yamanouchi, Kazuhiko; *T-MTT* v26 n4 Apr 78 298-305 (1F06)
Kane, Lawrence J., see Baker, Robert J.; *T-MTT* v26 n8 Aug 78 541-545 (1B13)
Kantor, Gideon, Donald M. Witters Jr. and John W. Greiser; The performance of a new direct contact applicator for microwave diathermy; *T-MTT* v26 n8 Aug 78 563-568 (1D07)
Kato, Yasuyuki, see Sakai, Jun-ichi; *T-MTT* v26 n9 Sep 78 658-665 (1C04)
Kawasaki, Ryoji and Masami Akaike; A broad-band second-harmonic mixer covering 76–106 GHz; *T-MTT* v26 n6 Jun 78 425-427 (1D05)
Keen, Nigel J., Robert W. Haas and Peter Zimmermann; Avalanche noise from Schottky barrier diodes in the frequency range 75–115 GHz (Tech. n.); *T-MTT* v26 n10 Oct 78 843-844 (2D07)
Kerbs, Donald, see Albanese, Victor J.; *T-MTT* v26 n5 May 78 348-354 (1C02)
Kerr, Anthony R., see Held, Daniel N.; *T-MTT* v26 n2 Feb 78 49-55 (1A03)
Khilla, Abdel-Messias and Ingo Wolff; Field theory treatment of *H*-plane waveguide junction with triangular ferrite post; *T-MTT* v26 n4 Apr 78 279-287 (1E01)
Kim, J. H., see Antich, Peter P.; *T-MTT* v26 n8 Aug 78 569-572 (1D13)
Kimura, Tatsuya, see Sakai, Jun-ichi; *T-MTT* v26 n9 Sep 78 658-665 (1C04)
King, Morrell L., see Buck, Daniel C.; *T-MTT* v26 n5 May 78 357-360 (1C11)
Kitayama, Kenichi, see Sakai, Jun-ichi; *T-MTT* v26 n9 Sep 78 658-665 (1C04)
Klohn, Kenneth L., Robert E. Horn, Harold Jacobs and Elmer Freibergs; Silicon waveguide frequency scanning linear array antenna; *T-MTT* v26 n10 Oct 78 764-773 (1E06)
Kneppo, Ivan; Integration method of measuring *Q* of the microwave resonators (Tech. n.); *T-MTT* v26 n2 Feb 78 131 (1G01)
Kneppo, Ivan and Michal Weiss; Measurement of microwave loss tangent by means of microwave resonator bridge (Short p.); *T-MTT* v25 n5 May 77 418-423 (1F08)
Comments, T-MTT v26 n4 Apr 78 314-315 (2A01)
Knierr, Reinhard H., *Guest ed.*; Foreword; *T-MTT* v26 n10 Oct 78 705 (1A03)
Knochel, Reinhard, see Schunemann, Klaus; *T-MTT* v26 n3 Mar 78 147-155 (1A13)
Knochel, Reinhard and Klaus Schunemann; Noise and transfer properties of harmonically synchronized oscillators; *T-MTT* v26 n12 Dec 78 939-944 (1B03)
Kobayashi, Masanori; Analysis of the microstrip and the electrooptic light modulator; *T-MTT* v26 n2 Feb 78 119-126 (1F03)
Kobayashi, Masanori; Green's function technique for solving anisotropic electrostatic field problems; *T-MTT* v26 n7 Jul 78 510-512 (1D14)
Kobe, Ian H., see Baker, Robert J.; *T-MTT* v26 n8 Aug 78 541-545 (1B13)
Kobus, Miroslaw, see Szmigielski, Stanislaw; *T-MTT* v26 n8 Aug 78 520-522 (1A06)
Kodaira, Shinji, see Okamoto, Hiroshi; *T-MTT* v26 n8 Aug 78 627-628 (2B01)
Kohler, Jurgen, see Schiek, Burkhard; *T-MTT* v26 n1 Jan 78 5-7 (1A07)
Kohler, Jurgen, see Tulaja, Volker; *T-MTT* v26 n9 Sep 78 643-645 (1B03)
Komiyama, N., see Shimamura, Tadao; *T-MTT* v26 n12 Dec 78 945-951 (1B09)
Kong, Jin Au, see Chu, Ruey-Shi; *T-MTT* v25 n1 Jan 77 18-25 (1B06)
Konishi, Yoshihiro; Planar circuit mounted in waveguide used as a downconverter; *T-MTT* v26 n10 Oct 78 716-719 (1A14)
Konishi, Yoshihiro; 12-GHz-band FM receiver for satellite broadcasting; *T-MTT* v26 n10 Oct 78 720-725 (1B04)
Kopeika, N. S., see Makover, Yaakov; *T-MTT* v26 n1 Jan 78 38-43 (1C12)
Krey, A. K., see Larsen, Lawrence E.; *T-MTT* v26 n8 Aug 78 581-595 (1E11)
Krowne, Clifford M., see Alexopoulos, Nicolaos G.; *T-MTT* v26 n6 Jun 78 387-393 (1A09)
Kumagai, Nobuaki, see Geshiro, Masahiro; *T-MTT* v26 n2 Feb 78 115-119 (1E13)
Kumagai, Nobuaki, see Masaki, Yoshifumi; *T-MTT* v26 n11 Nov 78 852-855 (1A10)
Kumagai, Nobuaki, see Morishita, Katsumi; *T-MTT* v26 n9 Sep 78 684-689 (1E02)
Kumagai, Nobuaki, see Tsutsumi, Makoto; *T-MTT* v25 n3 Mar 77 224-228 (1E02)
Kumar, Mahesh and M. G. Sharma; Comments on 'Aperture coupling between microstrip and resonant cavities'; *T-MTT* v26 n9 Sep 78 690-691 (1E08)
Kuramoto, Minoru, see Nakamura, Makoto; *T-MTT* v26 n5 May 78 354-356 (1C08)
Kurebayashi, Hidetoshi, see Mizobuchi, Akihito; *T-MTT* v26 n12 Dec 78 1012-1016 (1G06)
Kuwamoto, Yoshitomo, see Chiba, Jiro; *T-MTT* v26 n6 Jun 78 439-443 (1E05)

L

- Lai, Ping-Kwong**, Charles A. Cain and Howard S. Ducoff; Interaction between 2450-MHz microwaves and ionizing radiation in tribolium confusum; *T-MTT* v26 n8 Aug 78 530-534 (1B02)

- Larsen, Lawrence E.**, John H. Jacobi and A. K. Krey; Preliminary observations with an electromagnetic method for the noninvasive analysis of cell suspension physiology and induced pathophysiology; *T-MTT* v26 n8 Aug 78 581-595 (1E11)
Lee, K. W., see Harris, D. J.; *T-MTT* v26 n12 Dec 78 998-1001 (1F06)
Lehmann, Justus F., Arthur W. Guy, Jerry B. Stonebridge and Barbara J. deLateur; Evaluation of a therapeutic direct-contact 915-MHz microwave applicator for effective deep-tissue heating in humans; *T-MTT* v26 n8 Aug 78 556-563 (1C14)
Lehmann, Justus F., see Guy, Arthur W.; *T-MTT* v26 n8 Aug 78 550-556 (1C08)
Lewin, Leonard; Spurious radiation from a microstrip *Y* junction; *T-MTT* v26 n11 Nov 78 893-894 (1D09)
Linke, R. A., Martin V. Schneider and A. Y. Cho; Cryogenic millimeter-wave receiver using molecular beam epitaxy diodes; *T-MTT* v26 n12 Dec 78 935-938 (1A13)
Lipparini, Alessandro, see Rizzoli, Vittorio; *T-MTT* v26 n1 Jan 78 7-15 (1A09)
Luczak, Miroslaw, see Szmigielski, Stanislaw; *T-MTT* v26 n8 Aug 78 520-522 (1A06)

M

- Magerl, Gottfried**; Fast measurement of cavity coupling coefficients (Tech. n.); *T-MTT* v26 n3 Mar 78 223-224 (1G05)
Magerl, Gottfried; Ridged waveguides with inhomogeneous dielectric-slab loading; *T-MTT* v26 n6 Jun 78 413-416 (1C07)
Comments, T-MTT v26 n11 Nov 78 919 (1F06)
Makover, Yaakov, Oded R. Manor and N. S. Kopeika; Very high sensitivity detection of *X*-band radiation with neon indicator lamps; *T-MTT* v26 n1 Jan 78 38-43 (1C12)
Malherbe, Johannes A. G. and Andre F. Steyn; The compensation of step discontinuities in TEM-mode transmission lines; *T-MTT* v26 n11 Nov 78 883-885 (1C13)
Mallick, Amiya Kumar and Gitendra S. Sanyal; Electromagnetic wave propagation in a rectangular waveguide with sinusoidally varying width; *T-MTT* v26 n4 Apr 78 243-249 (1B07)
Manor, Oded R., see Makover, Yaakov; *T-MTT* v26 n1 Jan 78 38-43 (1C12)
Marx, Kenneth D.; Propagation modes, equivalent circuits, and characteristic terminations for multiconductor transmission lines with inhomogeneous dielectrics; *T-MTT* v21 n7 Jul 73 450-457 (1C04)
Comments, T-MTT v26 n11 Nov 78 915-918 (1F02)
Masaki, Yoshifumi, Masanori Matsuhara and Nobuaki Kumagai; Effect of lossy cladding on modal dispersion characteristics of parabolic-index fiber; *T-MTT* v26 n11 Nov 78 852-855 (1A10)
Matsuhara, Masanori, see Geshiro, Masahiro; *T-MTT* v26 n2 Feb 78 115-119 (1E13)
Matsuhara, Masanori, see Masaki, Yoshifumi; *T-MTT* v26 n11 Nov 78 852-855 (1A10)
Matsumoto, Tadashi, see Tatekura, Kohichi; *T-MTT* v26 n7 Jul 78 487-493 (1C05)
Matsu, Toyoki, see Shigesawa, Hiroshi; *T-MTT* v26 n12 Dec 78 992-997 (1E14)
Mautz, J. R. and R. F. Harrington; Transmission from a rectangular waveguide into half space through a rectangular aperture (Computer program descr.); *T-MTT* v26 n1 Jan 78 44-45 (1D04)
Comments, T-MTT v26 n9 Sep 78 690 (1E08)
Mautz, Joseph R.; Mie series solution for a sphere (Computer program descr.); *T-MTT* v26 n5 May 78 375 (1E01)
Mazumder, Shamsur R. and P. D. van der Puije; 'Two-signal' method of measuring the large-signal *S*-parameters of transistors; *T-MTT* v26 n6 Jun 78 417-420 (1C11)
McCulloch, Duncan, see Robinson, J. Eugene; *T-MTT* v26 n8 Aug 78 546-549 (1C04)
McMaster, Thomas F., see Carlson, Eric R.; *T-MTT* v26 n10 Oct 78 706-715 (1A04)
McMillan, Robert W., see Wrixon, Gerard T.; *T-MTT* v26 n6 Jun 78 434-439 (1D14)
Mehran, Reza; Calculation of microstrip bends and *Y*-junctions with arbitrary angle; *T-MTT* v26 n6 Jun 78 400-405 (1B08)
Meier, Paul J.; Millimeter integrated circuits suspended in the *E*-plane of rectangular waveguide; *T-MTT* v26 n10 Oct 78 726-733 (1B10)
Menzel, W.; Calculation of the *S*-parameters of an unsymmetric microstrip *T*-junction (Computer program descr.); *T-MTT* v26 n3 Mar 78 217 (1F13)
Meys, R. P.; A wave approach to the noise properties of linear microwave devices; *T-MTT* v26 n1 Jan 78 34-37 (1C08)
Mihran, Theodore G.; Microwave oven mode tuning by slab dielectric loads; *T-MTT* v26 n6 Jun 78 381-387 (1A03)
Milner, John A., see Piontek, Gerald E.; *T-MTT* v26 n8 Aug 78 535-540 (1B07)
Miyazawa, Keisuke, see Okamoto, Hiroshi; *T-MTT* v26 n8 Aug 78 627-628 (2B01)
Mizobuchi, Akihito and Hidetoshi Kurebayashi; Nonreciprocal remanence ferrite phase shifters using the grooved waveguide; *T-MTT* v26 n12 Dec 78 1012-1016 (1G06)
Mohr, Hans J.; A reactive fourth-harmonic filter operating at 400-kW CW; *T-MTT* v26 n5 May 78 341-345 (1B09)
Morishita, Katsumi and Nobuaki Kumagai; Systematic derivation of variational expressions for electromagnetic and/or acoustic waves; *T-MTT* v26 n9 Sep 78 684-689 (1E02)
Motoya, Kaoru, see Nishizawa, Jun-ichi; *T-MTT* v26 n12 Dec 78 1029-1035 (2A13)
Mousavinezhad, Seyed Hossein, Kun-Mu Chen and Dennis Paul Nyquist; Response of insulated electric field probes in finite heterogeneous biological bodies; *T-MTT* v26 n8 Aug 78 599-607 (1G01)

N

- Naito, Yoshiyuki**, see Araki, Kiyomichi; *T-MTT* v26 n7 Jul 78 506-509 (1D10)
Nakamura, Makoto, Takaya Saito and Minoru Kuramoto; Characteristics of high-power breakdown at 28 GHz; *T-MTT* v26 n5 May 78 354-356 (1C08)
Nanbu, Shutaro; A new MIC Doppler module; *T-MTT* v26 n3 Mar 78 192-196 (1E02)
Nanbu, Shutaro; An MIC Doppler module with output radiation normal to the substrate plane; *T-MTT* v26 n1 Jan 78 3-5 (1A05)
Neale, Brian M. and A. Gopinath; Microstrip discontinuity inductances; *T-MTT* v26 n10 Oct 78 827-831 (2C05)
Neelakantaswamy, Perambur S., Krishna Kumar Gupta and Dilip Kumar Banerjee; A compact light-weight Gaussian-beam launcher for microwave exposure studies; *T-MTT* v26 n9 Sep 78 665-666 (1C11)

- Ness, John B. and M. W. Gunn: Air-gap effect in rectangular waveguide containing a lossy H-plane dielectric slab. *T-MTT* v26 n11 Nov 78 894-897 (1D10)
- Nishizawa, Jun-ichi, Kaoru Motoya and Yasuo Okuno: GaAs TUNNETT diodes: *T-MTT* v26 n12 Dec 78 1029-1035 (2A13)
- Norman, Scott L., see Proud, Joseph M.: *T-MTT* v26 n3 Mar 78 137-140 (1A03)
- Nyquist, Dennis Paul, see Mousavinezhad, Seyed Hossein; *T-MTT* v26 n8 Aug 78 599-607 (1G01)

O

- Ogusu, Kazuhiko: Measurements of dispersion characteristics and field distributions in rectangular-dielectric waveguide and its modifications; *T-MTT* v26 n3 Mar 78 169-171 (1C07)
- Ohwi, Koichi, see Okada, Fumiaki; *T-MTT* v26 n12 Dec 78 1035-1039 (2B05)
- Okada, Fumiaki and Koichi Ohwi: Design of a high-power CW Y-junction waveguide circulator; *T-MTT* v26 n5 May 78 364-369 (1D04)
- Okada, Fumiaki, Koichi Ohwi and Yukio Yokochi: YIG resonator circuit with isolator property and its application to a Gunn diode oscillator; *T-MTT* v26 n12 Dec 78 1035-1039 (2B05)
- Okamoto, Hiroshi and Mutsuo Ikeda, Cavity stabilization and electronic tuning of a millimeter-wave IMPATT diode oscillator by parametric interaction; *T-MTT* v26 n6 Jun 78 420-424 (1C14)
- Okamoto, Hiroshi, Mutsuo Ikeda, Shinji Kodaira and Keisuke Miyazawa: Highly stable, low noise millimeter-wave IMPATT oscillator (Tech. n.); *T-MTT* v26 n2 Feb 78 136 (1G06)
- Okamoto, Hiroshi, Mutsuo Ikeda, Shinji Kodaira and Keisuke Miyazawa: Highly stable, low noise millimeter-wave IMPATT oscillator (Tech. n.); *T-MTT* v26 n8 Aug 78 627-628 (2B01)
- Okamoto, Katsunari and Takanori Okoshi: Vectorial wave analysis of inhomogeneous optical fibers using finite element method; *T-MTT* v26 n2 Feb 78 109-114 (1E07)
- Okoshi, Takanori, see Okamoto, Katsunari; *T-MTT* v26 n2 Feb 78 109-114 (1E07)
- Okuno, Yasuo, see Nishizawa, Jun-ichi; *T-MTT* v26 n12 Dec 78 1029-1035 (2A13)
- Overgaard, Jens: Biological effect of 27.12-MHz short-wave diathermic heating in experimental tumors; *T-MTT* v26 n8 Aug 78 523-529 (1A09)

P

- Painchaud, Guy R., see James, David S.; *T-MTT* v25 n5 May 77 392-398 (1D10)
- Panasik, Carl M. and Bill J. Hunsinger: Harmonic analysis of SAW transducers; *T-MTT* v26 n6 Jun 78 447-450 (1E13)
- Pandharipande, V. M. and B. N. Das: Coupling of waveguides through large apertures; *T-MTT* v26 n3 Mar 78 209-212 (1F05)
- Panini, Luigi, see Bianco, Bruno; *T-MTT* v26 n3 Mar 78 182-185 (1D06)
- Paolino, Donald D.: MIC overlay coupler design using spectral domain techniques; *T-MTT* v26 n9 Sep 78 646-649 (1B06)
- Papiernik, Albert, see Fray, Claude; *T-MTT* v26 n11 Nov 78 886-892 (1D02)
- Parekh, Jayantkumar P. and Hang-Sheng Tuan: Reflection of magnetostatic forward volume waves by a shallow-grooved grating on a YIG film; *T-MTT* v26 n12 Dec 78 1039-1044 (2B09)
- Parker, Don: Editorial from the previous editor; *T-MTT* v26 n1 Jan 78 1 (1A03)
- Parodi, Mauro, see Bianco, Bruno; *T-MTT* v26 n3 Mar 78 182-185 (1D06)
- Paul, Jeffrey A. and Yu-Wen Chang: Millimeter-wave image-guide integrated passive devices; *T-MTT* v26 n10 Oct 78 751-754 (1D07)
- Paunovic, Zojka, see Kajfez, Darko; *T-MTT* v26 n10 Oct 78 806-808 (2A12)
- Pavlidis, Dimitrios, Hans Ludwig Hartnagel and Kazutaka Tomizawa: Dynamic considerations of injection locked pulsed oscillators with very fast switching characteristics; *T-MTT* v26 n3 Mar 78 162-169 (1B14)
- Pavlin, Stane, see Kajfez, Darko; *T-MTT* v26 n10 Oct 78 806-808 (2A12)
- Penunuri, David: A numerical technique for SAW diffraction simulation; *T-MTT* v26 n4 Apr 78 288-294 (1E10)
- Perry, John P., see Bromagim, Dan R.; *T-MTT* v26 n5 May 78 322-325 (1A04)
- Phillips, Theodore L., see Baker, Robert J.; *T-MTT* v26 n8 Aug 78 541-545 (1B13)
- Pintzos, Sotirios G. and Reinhold Pregla: A simple method for computing the resonant frequencies of microstrip ring resonators; *T-MTT* v26 n10 Oct 78 809-813 (2B01)
- Piontek, Gerald E., Charles A. Cain and John A. Milner: The effects of microwave radiation, hyperthermia, and L-ascorbic acid on Ehrlich ascites carcinoma cell metabolism; *T-MTT* v26 n8 Aug 78 535-540 (1B07)
- Pompei, Dominique, Olivier Benevise and Edouard Rivier, Parallel line microstrip filters in an inhomogeneous medium; *T-MTT* v26 n4 Apr 78 231-238 (1A09)
- Pratesi, Riccardo and Laura Ronchi: Wave propagation in a nonparabolic graded-index medium; *T-MTT* v26 n11 Nov 78 856-858 (1A14)
- Pregla, Reinhold, see Pintzos, Sotirios G.; *T-MTT* v26 n10 Oct 78 809-813 (2B01)
- Presser, Adolph: Interdigitated microstrip coupler design; *T-MTT* v26 n10 Oct 78 801-805 (2A07)
- Priou, Alain C., see Fournet-Fayas, Cristian; *T-MTT* v26 n5 May 78 360-363 (1C14)
- Proud, Joseph M. and Scott L. Norman: High-frequency waveform generation using optoelectronic switching in silicon; *T-MTT* v26 n3 Mar 78 137-140 (1A03)

R

- Rahmat-Samii, Y., On the question of computation of the dyadic Green's function at the source region in waveguides and cavities (Short p.); *T-MTT* v23 n9 Sep 75 762-765 (1D02). Correction, *T-MTT* v26 n1 Jan 78 44 (1D04)
- Ramy, Jean-Pierre, Marie-Thérèse Cotte, Jean Pierre Bolloch, Raymond Schnitzler, Jean-Jérôme Guena and Claude Thebault: Optimization of the thick-and thin-film technologies for microwave circuits on alumina and fused silica substrates; *T-MTT* v26 n10 Oct 78 814-820 (2B06)
- Rauscher, C., see Willing, Harry A.; *T-MTT* v26 n12 Dec 78 1017-1023 (2A01)
- Raz, Shalom, see Halevy, Shalom; *T-MTT* v26 n6 Jun 78 406-412 (1B14)
- Reeves, J. M., see Harris, D. J.; *T-MTT* v26 n12 Dec 78 998-1001 (1F06)
- Rehmark, Stig: Meander-folded coupled lines; *T-MTT* v26 n4 Apr 78 225-231 (1A03)
- Riblet, Gordon P.: A directional coupler with very flat coupling; *T-MTT* v26 n2 Feb 78 70-74 (1B10). Correction, *T-MTT* v26 n9 Sep 78 691 (1E09)

- Riblet, Gordon P.: An eigenadmittance condition applicable to symmetrical four-port circulators and hybrids; *T-MTT* v26 n4 Apr 78 275-279 (1D11)
- Ridella, Sandro, see Bianco, Bruno; *T-MTT* v26 n3 Mar 78 182-185 (1D06)
- Ristic, Velimir M. and Thomas P. Sorensen: Generation of microwave power with a spark-gap cavity; *T-MTT* v26 n5 May 78 369-374 (1D09)
- Rivier, Edouard, see Pompei, Dominique; *T-MTT* v26 n4 Apr 78 231-238 (1A09)
- Rizk, M. R. M., see Bandler, J. W.; *T-MTT* v26 n12 Dec 78 963-972 (1C13)
- Rizzoli, Vittorio, see Bernardi, Paolo; *T-MTT* v26 n3 Mar 78 203-209 (1E13)
- Rizzoli, Vittorio and Alessandro Lippardini: The design of interdigitated couplers for MIC applications; *T-MTT* v26 n1 Jan 78 7-15 (1A09)
- Roberts, Larry K., see Eisenhart, Robert L.; *T-MTT* v26 n3 Mar 78 172-174 (1C10)
- Robertson, Ralston S., see Eisenhart, Robert L.; *T-MTT* v26 n3 Mar 78 172-174 (1C10)
- Robinson, J. Eugene, Augustine Y. Cheung, George M. Samaras and Duncan McCulloch: Techniques for uniform and replicable microwave hyperthermia of a model mouse carcinoma; *T-MTT* v26 n8 Aug 78 546-549 (1C04)
- Rodrigue, G. P.: 1977 MTT awards; *T-MTT* v26 n12 Dec 78 932-934 (1A10)
- Ronchi, Laura, see Pratesi, Riccardo; *T-MTT* v26 n11 Nov 78 856-858 (1A14)
- Ros, Alain E.: Design charts for inhomogeneous coupled microstrip lines; *T-MTT* v26 n6 Jun 78 394-400 (1B02)
- Rozzi, T. E.: Rigorous analysis of the step discontinuity in a planar dielectric waveguide; *T-MTT* v26 n10 Oct 78 738-746 (1C08)
- Ruppin, R.: Calculation of electromagnetic energy absorption in prolate spheroids by the point matching method; *T-MTT* v26 n2 Feb 78 87-90 (1C13)
- Ruscio, Joseph T., see Henry, Paul S.; *T-MTT* v26 n6 Jun 78 428-433 (1D08)

S

- Saad, Abdel Megid Kamal and Klaus Schuenemann: A simple method for analyzing fin-line structures; *T-MTT* v26 n12 Dec 78 1002-1007 (1F10)
- Safaa-Jazi, Ahmad and Gar Lam Yip, Cutoff conditions in three-layer cylindrical dielectric waveguides; *T-MTT* v26 n11 Nov 78 898-903 (1D14)
- Saito, Takaya, see Nakamura, Makoto; *T-MTT* v26 n5 May 78 354-356 (1C08)
- Sakaguchi, Yasunori, see Tsutsumi, Makoto; *T-MTT* v25 n3 Mar 77 224-228 (1E02)
- Sakai, Jun-ichi, Kenichi Kitayama, Masahiro Ikeda, Yasuyuki Kato and Tatsuya Kimura: Design considerations of broadband dual-mode optical fibers; *T-MTT* v26 n9 Sep 78 658-665 (1C04)
- Samaras, George M., see Robinson, J. Eugene; *T-MTT* v26 n8 Aug 78 546-549 (1C04)
- Sannino, Mario, see Caruso, Giuseppe; *T-MTT* v26 n9 Sep 78 639-642 (1A13)
- Santana, Carlos and Leopold B. Felsen: Ray-optical calculation of edge diffraction in unstable resonators; *T-MTT* v26 n2 Feb 78 101-108 (1D13)
- Sanyal, Gindra S., see Mallick, Amiya Kumar; *T-MTT* v26 n4 Apr 78 243-249 (1B07)
- Sato, Risaburo, see Chiba, Jiro; *T-MTT* v26 n6 Jun 78 439-443 (1E05)
- Schiek, Burkhard and Jürgen Köhler: Improving the isolation of 3-dB couplers in microstrip-slotline technique; *T-MTT* v26 n1 Jan 78 5-7 (1A07)
- Schiek, Burkhard, see Tulaja, Volker; *T-MTT* v26 n9 Sep 78 643-645 (1B03)
- Schneider, Martin V., see Carlson, Eric R.; *T-MTT* v26 n10 Oct 78 706-715 (1A04)
- Schneider, Martin V., see Linke, R. A.; *T-MTT* v26 n12 Dec 78 935-938 (1A13)
- Schnitzler, Raymond, see Ramy, Jean-Pierre; *T-MTT* v26 n10 Oct 78 814-820 (2B06)
- Schott, F. W.: On the Smith chart (Ltr.); *T-MTT* v26 n4 Apr 78 314 (2A01)
- Schuenemann, Klaus, see Knochel, Reinhard; *T-MTT* v26 n12 Dec 78 939-944 (1B03)
- Schuenemann, Klaus, see Saad, Abdel Megid Kamal; *T-MTT* v26 n12 Dec 78 1002-1007 (1F10)
- Schuenemann, Klaus and Reinhard Knochel: On the matching of transmission cavity stabilized microwave oscillators; *T-MTT* v26 n3 Mar 78 147-155 (1A13)
- Sciambi, Attilio F., Jr., see Goudey, Kenneth R.; *T-MTT* v26 n5 May 78 326-332 (1A08)
- Seidel, David B., Aperture excitation of a wire in a rectangular cavity; *T-MTT* v26 n11 Nov 78 908-914 (1E10)
- Seidel, David B. and James R. Wait, Transmission modes in a braided coaxial cable and coupling to a tunnel environment; *T-MTT* v26 n7 Jul 78 494-499 (1C12)
- Shamasundara, Sriragiparam D. and K. C. Gupta: Sensitivity analysis of coupled microstrip directional couplers; *T-MTT* v26 n10 Oct 78 788-794 (1G02)
- Sharma, M. G., see Kumar, Mahesh; *T-MTT* v26 n9 Sep 78 690-691 (1E08)
- Shaw, Don W., see Tserng, Hua Quen; *T-MTT* v26 n10 Oct 78 774-778 (1F02)
- Shibayama, Kimio, see Yamanouchi, Kazuhiko; *T-MTT* v26 n4 Apr 78 298-305 (1F06)
- Shigesawa, Hiroshi, Toyoki Matsuo and Kei Takiyama: Measurements of excitation condition and quantitative mode analysis in optical fibers; *T-MTT* v26 n12 Dec 78 992-997 (1E14)
- Shimamura, Tadao, N. Komiya, Y. Takimoto and M. Washio, 1.6-Gb/s 16-level superposed APSK modem with baseband signal processing coherent demodulator; *T-MTT* v26 n12 Dec 78 945-951 (1B09)
- Shin, Sang-Yung and Leopold B. Felsen: Multiply reflected Gaussian beams in a circular cross section; *T-MTT* v26 n11 Nov 78 845-851 (1A03)
- Shindo, Shuichi, see Itanami, Takao; *T-MTT* v26 n10 Oct 78 759-764 (1E01)
- Shindo, Shuichi and Takao Itanami: Low-loss rectangular dielectric image line for millimeter-wave integrated circuits; *T-MTT* v26 n10 Oct 78 747-751 (1D03)
- Shur, Michael S. and Lester F. Eastman: Surface-oriented transferred-electron devices; *T-MTT* v26 n12 Dec 78 1023-1028 (2A07)
- Simpson, T. L., see Thompson, J. E.; *T-MTT* v26 n8 Aug 78 573-580 (1E03)
- Smith, Vernon, see Baker, Robert J.; *T-MTT* v26 n8 Aug 78 541-545 (1B13)
- Sodi, Cesare M., see D'Inzeo, Guglielmo; *T-MTT* v26 n7 Jul 78 462-471 (1A08)
- Solbach, Klaus and Ingo Wolff: The electromagnetic fields and the phase constants of dielectric image lines; *T-MTT* v26 n4 Apr 78 266-274 (1D02)
- Solbach, Klaus: Electric probe measurements on dielectric image lines in the frequency range of 26-90 GHz; *T-MTT* v26 n10 Oct 78 755-758 (1D11)
- Sorensen, Carrol C., see Guy, Arthur W.; *T-MTT* v26 n8 Aug 78 550-556 (1C08)
- Sorensen, Thomas P., see Ristic, Velimir M.; *T-MTT* v26 n5 May 78 369-374 (1D09)
- Sorrentino, Roberto, see D'Inzeo, Guglielmo; *T-MTT* v26 n7 Jul 78 462-471 (1A08)
- Srivastava, N. C.: Surface wave propagation through a small gap between oppositely magnetized ferrite substrates; *T-MTT* v26 n3 Mar 78 213-215 (1F09)
- Srivastava, Neeraj C.: Propagation of magnetostatic waves along curved ferrite surfaces; *T-MTT* v26 n4 Apr 78 252-256 (1C02)
- Starski, J. Piotr: Optimization of the matching network for a hybrid-coupled phase shifter; *T-MTT* v25 n8 Aug 77 662-666 (1C06). Correction, *T-MTT* v26 n4 Apr 78 315 (2A02)

- Steenart, Willem** and Roy VanKoughnett: 1978 International Microwave Symposium: *T-MTT v26 n12 Dec 78* 927-931 (1A05)
- Steenart, Willem**, *Guest ed.*: Editor's overview: *T-MTT v26 n12 Dec 78* 926 (1A04)
- Stephenson, I. M.**, *see* Akello, Robert J.: *T-MTT v25 n5 May 77* 367-372 (1B13)
- Steyn, Andre F.**, *see* Malherbe, Johannes A. G.: *T-MTT v26 n11 Nov 78* 883-885 (1C13)
- Stonebridge, Jerry B.**, *see* Guy, Arthur W.: *T-MTT v26 n8 Aug 78* 550-556 (1C08)
- Stonebridge, Jerry B.**, *see* Lehmann, Justus F.: *T-MTT v26 n8 Aug 78* 556-563 (1C14)
- Sun, Y. Y.**, Comments on 'Propagation modes, equivalent circuits, and characteristic terminations for multiconductor transmission lines with inhomogeneous dielectrics': *T-MTT v26 n11 Nov 78* 915-918 (1F02)
- Swerdlow, Richard B.**: Analysis of intermodulation noise in frequency converters by Volterra series: *T-MTT v26 n4 Apr 78* 305-313 (1F13)
- Szmigielski, Stanislaw**, Marian Bielec, Marek Janiak, Mirosław Kobus, Mirosław Luczak and Erik De Clercq: Inhibition of tumor growth in mice by microwave hyperthermia, polyribonucleosine-polyribocytidylic, and mouse interferon: *T-MTT v26 n8 Aug 78* 520-522 (1A06)

T

- Tajima, Yusuke** and Susumu Kamihashi, Multiconductor couplers: *T-MTT v26 n10 Oct 78* 795-801 (2A01)
- Takada, Tohru** and Masahiro Hirayama: Hybrid integrated frequency multipliers at 300 and 450 GHz: *T-MTT v26 n10 Oct 78* 733-737 (1C03)
- Takamizawa, Hideo**, *see* Abe, Hiroyuki: *T-MTT v26 n3 Mar 78* 156-162 (1B08)
- Takayama, Yoichiro**, *see* Abe, Hiroyuki: *T-MTT v26 n3 Mar 78* 156-162 (1B08)
- Takimoto, Y.**, *see* Shimamura, Tadao: *T-MTT v26 n12 Dec 78* 945-951 (1B09)
- Takiyama, Kei**, *see* Shigesawa, Hiroshi: *T-MTT v26 n12 Dec 78* 992-997 (1E14)
- Tatekura, Kohichi**, Kiyohiko Itoh and Tadashi Matsumoto: Techniques and formulations for mode coupling of multimode optical fibers: *T-MTT v26 n7 Jul 78* 487-493 (1C05)
- Thal, Herbert L., Jr.**: Computer-aided filter alignment and diagnosis: *T-MTT v26 n12 Dec 78* 958-963 (1C08)
- Thebault, Claude**, *see* Ramy, Jean-Pierre: *T-MTT v26 n10 Oct 78* 814-820 (2B06)
- Thompson, J. E.**, T. L. Simpson and J. B. Caulfield: Thermographic tumor detection enhancement using microwave heating: *T-MTT v26 n8 Aug 78* 573-580 (1E03)
- Thomson, Ian**, *see* Gibson, Maurice H.: *T-MTT v26 n10 Oct 78* 779-788 (1F07)
- Tippet, John C.** and David C. Chang: Characteristic impedance of a rectangular coaxial line with offset inner conductor: *T-MTT v26 n11 Nov 78* 876-883 (1C06)
- Tissi, Plinio**, *see* Bonetti, René R.: *T-MTT v26 n7 Jul 78* 471-477 (1B03)
- Tokita, N.**, *see* Antich, Peter P.: *T-MTT v26 n8 Aug 78* 569-572 (1D13)
- Tomiyasu, Kiyo**, *Guest ed.*: Foreword—Special issue on high-power microwaves: *T-MTT v26 n5 May 78* 321 (1A03)
- Tomizawa, Kazutaka**, *see* Pavlidis, Dimitrios: *T-MTT v26 n3 Mar 78* 162-169 (1B14)
- Tromp, H.**: Exact calculation of the uncertainty on the input reflection coefficient of arbitrary two ports due to mismatches and arbitrary reference planes: *T-MTT v26 n12 Dec 78* 973-978 (1D09)
- Tserng, Hua Quen**, Donald J. Coleman Jr., Friedrich H. Doerbeck, Don W. Shaw and William R. Wiseman: A 12-W GaAs Read-diode amplifier at X band: *T-MTT v26 n10 Oct 78* 774-778 (1F02)
- Tsutsumi, Makoto**, Yasunori Sakaguchi and Nobuaki Kumagai: Behavior of the magnetostatic wave in a periodically corrugated YIG slab (Short p.). *T-MTT v25 n3 Mar 77* 224-228 (1E02). *Correction*: *T-MTT v26 n5 May 78* 374 (1D14)
- Tuan, Hang-Sheng**, *see* Parekh, Jayantkumar P.: *T-MTT v26 n12 Dec 78* 1039-1044 (2B09)
- Tulaja, Volker**, Burkhard Schiek and Jurgen Kohler: An interdigitated 3-dB coupler with three strips: *T-MTT v26 n9 Sep 78* 643-645 (1B03)

V

- van der Puije, P. D.**, *see* Mazumder, Shamsur R.: *T-MTT v26 n6 Jun 78* 417-420 (1C11)
- VanKoughnett, Roy**, *see* Steenart, Willem: *T-MTT v26 n12 Dec 78* 927-931 (1A05)
- Venema, Adrian**, Jozef J. M. Dekkers and R. F. Humphries: Static capacitance calculations for a surface acoustic wave interdigital transducer in multilayered media: *T-MTT v26 n4 Apr 78* 294-297 (1F02)

W

- Wait, James R.**, *see* Seidel, David B.: *T-MTT v26 n7 Jul 78* 494-499 (1C12)
- Walker, John L. B.**: Exact and approximate synthesis of TEM-mode transmission-type directional filters: *T-MTT v26 n3 Mar 78* 186-192 (1D10)
- Walker, P. N.**, *see* Helsen, Joseph: *T-MTT v26 n9 Sep 78* 653-658 (1B13)
- Wang, Johnson J. H.**: Analysis of a three-dimensional arbitrarily shaped dielectric or biological body inside a rectangular waveguide: *T-MTT v26 n7 Jul 78* 457-462 (1A03)
- Wang, Yen-Chu**: Cylindrical and cylindrically warped strip and microstriplines: *T-MTT v26 n1 Jan 78* 20-23 (1B08)
- Wang, Yen-Chu**: The screening potential theory of excess conduction loss at millimeter and submillimeter wavelengths: *T-MTT v26 n11 Nov 78* 858-861 (1B02)
- Washio, M.**, *see* Shimamura, Tadao: *T-MTT v26 n12 Dec 78* 945-951 (1B09)
- Watanabe, K.**: Comments on 'Measurement of microwave loss tangent by means of microwave resonator bridge': *T-MTT v26 n4 Apr 78* 314-315 (2A01)
- Webb, Denis C.**, *see* Ganguly, Achintya K.: *T-MTT v26 n6 Jun 78* 444-447 (1E10)
- Weil, Claude M.**: The characteristic impedance of rectangular transmission lines with thin center conductor and air dielectric: *T-MTT v26 n4 Apr 78* 238-242 (1B02)
- Weis, Michal**, *see* Kneppo, Ivan: *T-MTT v25 n5 May 77* 418-423 (1F08)
- Weller, J. F.**, *see* Crowley, J. D.: *T-MTT v26 n2 Feb 78* 134-135 (1G04)
- Wengenroth, Robert D.**: A mode transducing antenna: *T-MTT v26 n5 May 78* 332-334 (1A14)
- Wexler, Alvin**, *see* Jeng, Garbo: *T-MTT v26 n2 Feb 78* 91-94 (1D03)
- Wheeler, Harold A.**: Transmission-line properties of a strip line between parallel planes: *T-MTT v26 n11 Nov 78* 866-876 (1B10)

- Willing, Harry A.**, C. Rauscher and Pietro de Santis: A technique for predicting large-signal performance of a GaAs MESFET: *T-MTT v26 n12 Dec 78* 1017-1023 (2A01)
- Wiseman, William R.**, *see* Tserng, Hua Quen: *T-MTT v26 n10 Oct 78* 774-778 (1F02)
- Witters, Donald M., Jr.**, *see* Kantor, Gideon: *T-MTT v26 n8 Aug 78* 563-568 (1D07)
- Wolff, Ingo**, *see* Khilla, Abdel-Messias: *T-MTT v26 n4 Apr 78* 279-287 (1E01)
- Wolff, Ingo**, *see* Solbach, Klaus: *T-MTT v26 n4 Apr 78* 266-274 (1D02)
- Wrixon, Gerard T.** and Robert W. McMillan: Measurements of earth-space attenuation at 230 GHz: *T-MTT v26 n6 Jun 78* 434-439 (1D14)

Y

- Yamanouchi, Kazuhiko**, Toshiaki Kamiya and Kimio Shibayama: New leaky surface waves in anisotropic metal-diffused optical waveguides: *T-MTT v26 n4 Apr 78* 298-305 (1F06)
- Yip, Gar Lam**, *see* Safaai-Jazi, Ahmad: *T-MTT v26 n11 Nov 78* 898-903 (1D14)
- Yokochi, Yukio**, *see* Okada, Fumiaki: *T-MTT v26 n12 Dec 78* 1035-1039 (2B05)
- Young, C. W., Jr.**: Comments on 'Ridged waveguides with inhomogeneous dielectric-slab loading': *T-MTT v26 n11 Nov 78* 919 (1F06)

Z

- Zimmermann, Peter**, *see* Keen, Nigel J.: *T-MTT v26 n10 Oct 78* 843-844 (2D07)

SUBJECT INDEX

A

- Absorbing media**; *cf.* Electromagnetic propagation, absorbing media
- Acoustic diffraction**; *cf.* Acoustic surface-wave diffraction
- Acoustic filters**; *cf.* Acoustic surface-wave filters
- Acoustic measurements**; *cf.* Acoustic surface-wave measurements
- Acoustic propagation, nonhomogeneous media**; *cf.* Acoustic surface-wave propagation, nonhomogeneous media
- Acoustic reflection**; *cf.* Acoustic surface-wave reflection
- Acoustic surface waves**
variational expressions derivation for problems involving coupling between electric and acoustic fields; systematic derivation procedure: *Morishita, Katsumi*: *T-MTT v26 n9 Sep 78* 684-689 (1E02)
- Acoustic surface-wave diffraction**
numerical technique for simulating effect of diffraction on device performance: *Penunuri, David*: *T-MTT v26 n4 Apr 78* 288-294 (1E10)
- Acoustic surface-wave filters**
diffraction simulation; numerical technique: *Penunuri, David*: *T-MTT v26 n4 Apr 78* 288-294 (1E10)
- Acoustic surface-wave measurements**
metal film height above surface of piezoelectric substrate determined from attenuation and phase delay measurements: *Crowley, J. D.*: *T-MTT v26 n2 Feb 78* 134-135 (1G04)
- Acoustic surface-wave propagation, nonhomogeneous media**
interdigital structure in multilayer media; static capacitance calculation: *Venema, Adrian*: *T-MTT v26 n4 Apr 78* 294-297 (1F02)
- Acoustic surface-wave reflection**
Gaussian beams, multiple reflection in circular cross section: *Shin, Sang-Yung*: *T-MTT v26 n11 Nov 78* 845-851 (1A03)
- Acoustic surface-wave transducers**
excitation function of unapodized interdigital transducer determined by measuring discrete impulse response: *Panasik, Carl M.*: *T-MTT v26 n6 Jun 78* 447-450 (1E13)
interdigital structure in multilayer media, static capacitance calculation: *Venema, Adrian*: *T-MTT v26 n4 Apr 78* 294-297 (1F02)
- Acoustic transducers**; *cf.* Acoustic surface-wave transducers
- Acoustoelectricity**
variational expressions derivation for problems involving coupling between electric and acoustic fields; systematic derivation procedure: *Morishita, Katsumi*: *T-MTT v26 n9 Sep 78* 684-689 (1E02)
- Adhesives**; *cf.* Bonding
- Aircraft antennas**
switching network for dual-mode antenna: 2-3 kW switching: *Albanese, Victor J.*: *T-MTT v26 n5 May 78* 348-354 (1C02)
- Aircraft radar**
multipactor receiver protectors for airborne applications: 50-kW peak power and 12.5 percent bandwidth in X-band: *Carlsle, Thomas P.*: *T-MTT v26 n5 May 78* 345-347 (1B13)
- Am modulation/demodulation**
microwave SSB modulator pumped at submultiple of carrier frequency; Schottky diode modulator: *Chramiec, Jerzy*: *T-MTT v26 n9 Sep 78* 635-638 (1A09)
- Amplifiers**; *cf.* Microwave amplifiers
- Amplifier noise**
microwave linear devices; wave approach to characterizing noise properties: *Mervs, R. P.*: *T-MTT v26 n1 Jan 78* 34-37 (1C08)
- Anisotropic media**; *cf.* Electromagnetic propagation, anisotropic media
- Anisotropic media**
electrostatic field problems involving nonhomogeneous anisotropic media, Green's function technique: *Kobayashi, Masanori*: *T-MTT v26 n7 Jul 78* 510-512 (1D14)
- Antennas**; *cf.* Aircraft antennas; Dielectric-covered antennas; Dipole antennas; Leaky-wave antennas; Microwave antennas; Millimeter-wave antennas; Monopulse radar antennas; Probe antennas; Reflector antennas; Scanning antennas; Stripline antennas; Waveguide antennas
- Antenna accessories**
switching network for dual-mode antenna, 2-3 kW switching: *Albanese, Victor J.*: *T-MTT v26 n5 May 78* 348-354 (1C02)
- Antenna arrays**; *cf.* Frequency-scanned arrays

Antenna feeds; cf. Horn antennas**Aperture**

wire inside rectangular cavity excited by external sources coupled to interior by aperture in cavity wall; current excited on wire; *Seidel, David B.*; *T-MTT v26 n11 Nov 78 908-914 (1E10)*

Aperture antennas; cf. Waveguide antennas**Apertures**

electromagnetic transmission through filled slit in conducting plane of finite thickness; TE case; *Auckland, David T.*; *T-MTT v26 n7 Jul 78 499-505 (1D03)*
microstrip-cavity resonator coupling through aperture in substrate ground plane; *Kumar, Mahesh*; *T-MTT v26 n9 Sep 78 690-691 (1E08)*
waveguide couplers, transverse slot in common broadwall between two guides; equivalent circuit; *Pandharipande, V. M.*; *T-MTT v26 n3 Mar 78 209-212 (1F05)*

APK

abbr. of Amplitude-and-phase shift keying

APK modulation/demodulation

1.6-Gb/s 16-level superposed modem using baseband signal processing coherent demodulator; *Shimamura, Tadao*; *T-MTT v26 n12 Dec 78 945-951 (1B09)*

Arc discharges

ferrite isolators, thermal stress-induced breakdown, adhesive layer rupture initiates breakdown; *Buck, Daniel C.*; *T-MTT v26 n5 May 78 357-360 (1C11)*
waveguide at 28 GHz; *Nakamura, Makoto*; *T-MTT v26 n5 May 78 354-356 (1C08)*

Atmosphere; cf. Meteorology**Attenuation measurement**

dielectric image lines; electric probe measurements in 26–90 GHz range; *Solbach, Klaus*; *T-MTT v26 n10 Oct 78 755-758 (1D11)*
microwave loss and mode-conversion measurement; frequency-domain shuttle-pulse method; *Bernardi, Paolo*; *T-MTT v26 n3 Mar 78 203-209 (1E13)*
millimeter-wave dielectric waveguides of circular cross section; attenuation characteristics in 72-GHz band; *Jablonski, Daniel*; *T-MTT v26 n9 Sep 78 667-671 (1C13)*
millimeter-wave propagation at 230 GHz through total atmosphere; *Wrixon, Gerard T.*; *T-MTT v26 n6 Jun 78 434-439 (1D14)*

Avalanche breakdown

Schottky-barrier diodes in 75–115 GHz range; avalanche noise; *Keen, Nigel J.*; *T-MTT v26 n10 Oct 78 843-844 (2D07)*

Avalanche diodes; cf. IMPATT diodes**Avalanche diodes**

tunnel injection transit time diode operating from 100 to 248 GHz; GaAs diodes; *Nishizawa, Jun-ichi*; *T-MTT v26 n12 Dec 78 1029-1035 (2A13)*

Avalanche diode amplifiers; cf. IMPATT diode amplifiers**Avalanche diode amplifiers**

GaAs Read-diode X-band amplifier in microstrip; 12-W output; *Tserng, Hua Quen*; *T-MTT v26 n10 Oct 78 774-778 (1F02)*

Avalanche diode oscillators; cf. IMPATT diode oscillators**Avalanche diode oscillators**

MIC Doppler module comprised of Ge avalanche diode oscillator and Schottky-barrier detector diode; *Nanbu, Shutaro*; *T-MTT v26 n3 Mar 78 192-196 (1E02)*

Awards

IEEE Microwave Theory and Techniques Society awards for 1977; *Rodrigue, G. P.*; *T-MTT v26 n12 Dec 78 932-934 (1A10)*

B**Bandpass filters**

acoustic surface-wave filters; diffraction simulation; *Penunuri, David*; *T-MTT v26 n4 Apr 78 288-294 (1E10)*
millimeter-wave channel dropping filter using dielectric rectangular waveguide; *Iitanami, Takao*; *T-MTT v26 n10 Oct 78 759-764 (1E01)*

Bandstop filters

millimeter-wave channel dropping filter using dielectric rectangular waveguide; *Iitanami, Takao*; *T-MTT v26 n10 Oct 78 759-764 (1E01)*

BARITT diodes

Doppler detectors for Doppler frequencies 1–1000 Hz; *Iijima, Y.*; *T-MTT v26 n2 Feb 78 132-133 (1G02)*

Barium alloys/compounds, devices

GaAs FET integrated oscillator with BaO–TiO₂ ceramic resonator; high-stability low-noise; *Abe, Hiroyuki*; *T-MTT v26 n3 Mar 78 156-162 (1B08)*

Bioelectric phenomena

coherent electrical vibrations in 10¹⁰–10¹² Hz range in biological systems; role of vibrations in controlling growth of tissues; *Frohlich, H.*; *T-MTT v26 n8 Aug 78 613-617 (2A01)*

Biological cells; cf. Tumors**Biological cells**

coherent electrical vibrations in 10¹⁰–10¹² Hz range in biological systems; role of vibrations in controlling growth of tissues; *Frohlich, H.*; *T-MTT v26 n8 Aug 78 613-617 (2A01)*
dielectric measurements in HF band for noninvasive analysis of cell membrane physiology and pathophysiology; *Larsen, Lawrence E.*; *T-MTT v26 n8 Aug 78 581-595 (1E11)*

Biological radiation effects; cf. Electromagnetic radiation effects**Bipolar transistors; cf.** Microwave bipolar transistors**Bipolar transistors**

scattering parameters measurement; large-signal *S*-parameters measurement using two-signal method; *Mazumder, Shamsur R.*; *T-MTT v26 n6 Jun 78 417-420 (1C11)*

Bipolar transistor amplifiers; cf. Microwave bipolar transistor amplifiers**Bonding**

ferrite isolators, thermal stress-induced breakdown; adhesive layer rupture initiates breakdown; *Buck, Daniel C.*; *T-MTT v26 n5 May 78 357-360 (1C11)*

Breakdown; cf. Gas discharges**Capacitance calculations**

acoustic surface-wave interdigital transducer in multilayer media; static capacitance; *Venema, Adrian*; *T-MTT v26 n4 Apr 78 294-297 (1F02)*
microstrip discontinuities; quasi-static formulation; *Gopinath, A.*; *T-MTT v26 n10 Oct 78 831-836 (2C09)*
microstrip; upper bound on capacitance; variational method and spectral domain approach; *Araki, Kiyomichi*; *T-MTT v26 n7 Jul 78 506-509 (1D10)*
microstrip with anisotropic substrates and electrooptic modulators; Green's function obtained using image coefficient method; *Kobayashi, Masanori*; *T-MTT v26 n2 Feb 78 119-126 (1F03)*

Capacitance measurement

microwave transistor mounted in microstrip; parasitic reactances measurement using resonance method; *Beneking, H.*; *T-MTT v26 n1 Jan 78 43 (1D03)*

Cascade networks

sensitivity and tolerance analysis; *Bandler, J. W.*; *T-MTT v26 n12 Dec 78 963-972 (1C13)*

Cassegrain antennas; cf. Reflector antennas, Cassegrain**Cavity perturbation methods**

loss tangent measurement for low-loss materials; resonator bridge method; *Watanabe, K.*; *T-MTT v26 n4 Apr 78 314-315 (2A01)*
microwave transistor mounted in microstrip; parasitic reactances measurement using resonance method; *Beneking, H.*; *T-MTT v26 n1 Jan 78 43 (1D03)*

Cavity resonators; cf. Resonators**Cavity resonators**

dyadic Green's function for rectangular guides and cavities; derivation using theory of distributions. *Rahmat-Samii, Y.*, *Correction*; *T-MTT v26 n1 Jan 78 44 (1D04)*
measuring coupling coefficients of transmission-type cavities; swept frequency method; *Magerl, Gottfried*; *T-MTT v26 n3 Mar 78 223-224 (1G05)*
measuring loss and mode-conversion; frequency-domain shuttle-pulse method; *Bernardi, Paolo*; *T-MTT v26 n3 Mar 78 203-209 (1E13)*
measuring *Q*: method based on relation between integral of resonance curve and *Q* of cavity; *Kneppo, Ivan*; *T-MTT v26 n2 Feb 78 131 (1G01)*
microstrip-cavity resonator coupling through aperture in substrate ground plane; *Kumar, Mahesh*; *T-MTT v26 n9 Sep 78 690-691 (1E08)*
microwave oscillators stabilized by transmission cavity; matching; *Schunemann, Klaus*; *T-MTT v26 n3 Mar 78 147-155 (1A13)*
millimeter-wave IMPATT oscillators; cavity stabilization and electronic tuning by parametric interaction; *Okamoto, Hiroshi*; *T-MTT v26 n6 Jun 78 420-424 (1C14)*
oven mode tuning by slab dielectric loads; *Mihran, Theodore G.*; *T-MTT v26 n6 Jun 78 381-387 (1A03)*
reentrant cylindrical cavities; resonant frequency calculation; *Jaworski, Marek*; *T-MTT v26 n4 Apr 78 256-260 (1C06)*
toroidal resonators; exact solution; *Cap, Ferdinand*; *T-MTT v26 n7 Jul 78 478-486 (1B10)*
wire inside rectangular cavity excited by external sources coupled to interior by aperture in cavity wall; current excited on wire; *Seidel, David B.*; *T-MTT v26 n11 Nov 78 908-914 (1E10)*

Cavity-resonator filters

alignment and diagnosis, computer-aided; *Thal, Herbert L., Jr.*; *T-MTT v26 n12 Dec 78 958-963 (1C08)*

Ceramic materials

nondestructive evaluation using electromagnetic millimeter waves to detect and locate defects; *Bahr, Alfred J.*; *T-MTT v26 n9 Sep 78 676-683 (1D08)*

Channel bank filters

blazed diffraction grating as frequency-selective element; *Henry, Paul S.*; *T-MTT v26 n6 Jun 78 428-433 (1D08)*
millimeter-wave channel dropping filter using dielectric rectangular waveguide; *Iitanami, Takao*; *T-MTT v26 n10 Oct 78 759-764 (1E01)*

Chirp modulation

linear FM ramp generator for long-range imaging radar; 1000-MHz bandwidth and 250- μ s duration; *Bromaghin, Dan R.*; *T-MTT v26 n5 May 78 322-325 (1A04)*

Circular waveguides; cf. Underground electromagnetic communication**Circular waveguides**

antennas fed from TE₀₁-mode guide; pencil beam formation; *Wengenoth, Robert D.*; *T-MTT v26 n5 May 78 332-334 (1A14)*
coaxial line driving thin cylindrical probe in TE₁₁-mode guide; input impedance seen by coaxial line. *Deshpande, M. D.*, *Correction*; *T-MTT v26 n4 Apr 78 315 (2A02)*
excitation; end launcher transition for exciting TE₁₁ mode from coaxial line. *Deshpande, M. D.*; *T-MTT v26 n9 Sep 78 672-675 (1D04)*
measuring mode conversion; frequency-domain shuttle-pulse method; *Bernardi, Paolo*; *T-MTT v26 n3 Mar 78 203-209 (1E13)*
millimeter-wave dielectric guides; attenuation characteristics in 72-GHz band; *Jablonski, Daniel*; *T-MTT v26 n9 Sep 78 667-671 (1C13)*

Circulators; cf. Ferrite circulators; Microstrip circulators; Stripline circulators**Circulators**

symmetrical 4-ports; eigenadmittance condition for perfect circulation to be obtainable by matching alone; *Riblet, Gordon P.*; *T-MTT v26 n4 Apr 78 275-279 (1D11)*

Coaxial cables

rectangular lines with thin center conductor and air dielectric; characteristic impedance; *Weil, Claude M.*; *T-MTT v26 n4 Apr 78 238-242 (1B02)*
tunnel containing braided coaxial cable; transmission modes in cable and coupling to tunnel environment; *Seidel, David B.*; *T-MTT v26 n7 Jul 78 494-499 (1C12)*

Coaxial cable discontinuities

junction with waveguide, coaxial line entering broad wall of rectangular guide; equivalent circuit; *Eisenhart, Robert L.*; *T-MTT v26 n3 Mar 78 172-174 (1C10)*

Coaxial components

circular waveguide excitation from coaxial line; end launcher transition for exciting TE₁₁ mode; *Deshpande, M. D.*; *T-MTT v26 n9 Sep 78 672-675 (1D04)*

Coaxial waveguides

rectangular line with offset inner conductor; characteristic impedance; *Tippet, John C.*; *T-MTT v26 n11 Nov 78 876-883 (1C06)*

Computer applications; cf. Specific topic**Conducting materials**

millimeter and submillimeter wavelength excess conduction loss in copper waveguides; screening potential theory; *Wang, Yen-Chu*; *T-MTT v26 n11 Nov 78 858-861 (1B02)*

C**Cables; cf.** Coaxial cables**Cancer; cf.** Tumors

- Conferences; cf.** Microwave Symposium, IEEE MTT-S International, Ottawa, Canada, 1978
- Copper devices**
millimeter and submillimeter wavelength excess conduction loss in copper waveguides; screening potential theory; *Wang, Yen-Chu; T-MTT v26 n11 Nov 78 858-861 (1B02)*
- Corrugated surfaces**
YIG slab having periodically corrugated surface; magnetostatic-wave propagation. *Tsutsumi, Makoto, Correction; T-MTT v26 n5 May 78 374 (1D14)*
- Coupled-mode analysis**
magnetostatic forward volume wave reflection characteristics of shallow grooved grating on YIG film; *Parekh, Jayantkumar P., T-MTT v26 n12 Dec 78 1039-1044 (2B09)*
optical fibers, multimode, power flow equation analysis; *Tatekura, Kohichi; T-MTT v26 n7 Jul 78 487-493 (1C05)*
- Coupled transmission lines; cf.** Multiconductor transmission lines
- Coupled transmission lines**
dielectric image lines of rectangular cross section; field distributions and phase constants calculation for single and coupled lines; *Solbach, Klaus; T-MTT v26 n4 Apr 78 266-274 (1D02)*
meander-folded coupled lines; shortening of electric length due to folding; *Rehmark, Stig; T-MTT v26 n4 Apr 78 225-231 (1A03)*
microstrip directional couplers; sensitivities of parameters of coupled-line coupler with respect to even- and odd-mode impedances; *Shamasundara, Sriripuram D.; T-MTT v26 n10 Oct 78 788-794 (1G02)*
microstrip filters; parallel coupled lines in nonhomogeneous medium, *Pompe, Dominique; T-MTT v26 n4 Apr 78 231-238 (1A09)*
microstrip, inhomogeneous coupled lines; design charts, *Rov, Alan E., T-MTT v26 n6 Jun 78 394-400 (1B02)*
microstrip on anisotropic substrates; *Alexopoulos, Nicolaos G.; T-MTT v26 n6 Jun 78 387-393 (1A09)*
microstrip parameters computation; high-speed procedure; *Jansen, Rolf H.; T-MTT v26 n2 Feb 78 75-82 (1C01)*
microstrip parameters computation; high-speed procedure *Jansen, R. H., Correction; T-MTT v26 n3 Mar 78 216 (1F12)*
- Couplers; cf.** Apertures; Directional couplers, Microstrip couplers, Slotline couplers; Stripline couplers
- Couplers**
waveguides, transverse slot in common broadwall between two guides; equivalent circuit; *Pandharipande, V. M.; T-MTT v26 n3 Mar 78 209-212 (1F05)*
- Cryogenics**
millimeter-wave receivers using molecular beam epitaxy diodes; 60-90 GHz band; *Linke, R. A.; T-MTT v26 n12 Dec 78 935-938 (1A13)*
p-i-n diode switch matrix consisting of 8 diodes in stripline package, cryogenically cooled C-band switch for radio astronomy; *Behrens, George H., Jr.; T-MTT v26 n9 Sep 78 629-635 (1A03)*
- Curved waveguides; cf.** Waveguide bends

D

- Detectors; cf.** Infrared detectors; Microwave detectors; Submillimeter-wave detectors
- Diathermy; cf.** Electromagnetic radiation therapy
- Dielectric antennas**
millimeter-wave frequency scanning array consisting of silicon dielectric rectangular rod with periodic metallic stripe perturbations on one side; *Klohn, Kenneth L.; T-MTT v26 n10 Oct 78 764-773 (1E06)*
- Dielectric bodies**
electromagnetic scattering; moment-method convergence improvement using interpolants; *Hagmann, Mark J.; T-MTT v26 n11 Nov 78 904-908 (1E06)*
- Dielectric breakdown; cf.** Gas discharges
- Dielectric-covered antennas**
probes in finite heterogeneous biological bodies, response of insulated spherical probes; *Mousavinezhad, Seyed Hossein, T-MTT v26 n8 Aug 78 599-607 (1G01)*
- Dielectric heating; cf.** Electromagnetic radiation effects; Microwave heating
- Dielectric-loaded waveguides**
bandwidth optimization with minimal power handling capacity and/or maximal allowed losses as constraints; *Halevy, Shalom; T-MTT v26 n6 Jun 78 406-412 (1B14)*
lossy *H*-plane slab with air gap between slab and broadwall; effect of air gap on propagation characteristics; *Ness, John B.; T-MTT v26 n11 Nov 78 894-897 (1D10)*
obstacles in irregularly shaped guide for which form function is imprecisely known; lower bound on phase shifts; *Kalikstein, Kalman; T-MTT v26 n4 Apr 78 250-252 (1B14)*
ridge guides with inhomogeneous dielectric-slab loading; dispersion characteristics; *Magerl, Gottfried; T-MTT v26 n6 Jun 78 413-416 (1C07)*
ridge guides with inhomogeneous dielectric-slab loading; dispersion characteristics; *Young, C. W., Jr.; T-MTT v26 n11 Nov 78 919 (1F06)*
three-dimensional arbitrarily shaped dielectric obstacles inside rectangular guide, analysis using dyadic Green's function; *Wang, Johnson J. H., T-MTT v26 n7 Jul 78 457-462 (1A03)*
- Dielectric measurements**
biological cell membrane physiological and pathophysiological measurements in HF band; *Larsen, Lawrence E.; T-MTT v26 n8 Aug 78 581-595 (1E11)*
microwave loss tangent of low-loss materials; resonator bridge method; *Watanabe, K.; T-MTT v26 n4 Apr 78 314-315 (2A01)*
millimeter-wave dielectric waveguides of circular cross section, attenuation characteristics in 72-GHz band; *Jablonski, Daniel; T-MTT v26 n9 Sep 78 667-671 (1C13)*
millimeter-wave evaluation of ceramic materials; detecting and locating defects; *Bahr, Alfred J.; T-MTT v26 n9 Sep 78 676-683 (1D08)*
- Dielectric resonators**
GaAs FET integrated oscillator with BaO-TiO₂ ceramic resonator, high-stability low-noise; *Abe, Hiroyuki; T-MTT v26 n3 Mar 78 156-162 (1B08)*
- Dielectric waveguides; cf.** Optical waveguides
- Dielectric waveguides**
image guide passive devices for millimeter-wave IC, couplers, detectors, and balanced mixers, *Paul, Jeffrey A.; T-MTT v26 n10 Oct 78 751-754 (1D07)*

- image lines, electric probe measurements in 26-90 GHz range; *Solbach, Klaus; T-MTT v26 n10 Oct 78 755-758 (1D11)*
- image lines for millimeter-wave IC; low-loss *E_{x11}* mode rectangular line; *Shindo, Shuichi; T-MTT v26 n10 Oct 78 747-751 (1D03)*
- image lines of rectangular cross section; field distributions and phase constants calculation for single and coupled lines; *Solbach, Klaus; T-MTT v26 n4 Apr 78 266-274 (1D02)*
- inhomogeneous slab guides; propagation analysis using regularized WKBJ method; *Ikuno, Hiroyoshi; T-MTT v26 n4 Apr 78 261-266 (1C11)*
- measurements of dispersion characteristics and field distributions in rectangular guide and its modifications; *Ogusu, Kazuhiko; T-MTT v26 n3 Mar 78 169-171 (1C07)*
- millimeter-wave guides of circular cross section; attenuation characteristics; *Jablonski, Daniel; T-MTT v26 n9 Sep 78 667-671 (1C13)*
- planar guide step discontinuity; rigorous variational approach; *Rozzi, T. E.; T-MTT v26 n10 Oct 78 738-746 (1C08)*
- slab of graded-index medium whose refractive index is polynomial expression of transverse coordinate, *Pratesi, Riccardo; T-MTT v26 n11 Nov 78 856-858 (1A14)*
- submillimeter-wave phase shifters, multilayer dielectric waveguide driven by p-i-n diode, *Buckman, A. B., Correction; T-MTT v26 n2 Feb 78 127 (1F11)*
- three-layer cylindrical guides; cutoff characteristics; *Safaai-Jazi, Ahmad; T-MTT v26 n11 Nov 78 898-903 (1D14)*
- Diffraction; cf.** Acoustic diffraction; Electromagnetic diffraction
- Digital modulation/demodulation; cf.** APK; PSK
- Diodes; cf.** Semiconductor diodes
- Diode phase shifters**
matching network design for hybrid-coupled phase shifters; transmission-line matching networks. *Stariski, J. Piotr, Correction; T-MTT v26 n4 Apr 78 315 (2A02)*
submillimeter-wave phase shifters; multilayer dielectric waveguide driven by p-i-n diode, *Buckman, A. B., Correction; T-MTT v26 n2 Feb 78 127 (1F11)*
- Dipole antennas**
MIC Doppler module with stripline dipole antenna and output radiation normal to substrate plane, *Nanbu, Shutarō; T-MTT v26 n1 Jan 78 3-5 (1A05)*
- Directional couplers; cf.** Hybrid junctions, Microstrip directional couplers; Slotline directional couplers; Stripline directional couplers
- Directional couplers**
high-power switching network for dual-mode antenna; *Albanese, Victor J.; T-MTT v26 n5 May 78 348-354 (1C02)*
very flat coupling characteristic; equivalent admittance of symmetrical 4-port couplers; *Riblet, Gordon P.; T-MTT v26 n2 Feb 78 70-74 (1B10)*
very flat coupling characteristic; equivalent admittance of symmetrical 4-port couplers, *Riblet, Gordon P., Correction; T-MTT v26 n9 Sep 78 691 (1E09)*
- Directional filters**
TEM-mode transmission-type filters, exact and approximate synthesis; *Walker, John L. B.; T-MTT v26 n3 Mar 78 186-192 (1D10)*
- Discontinuities; cf.** Transmission-line discontinuities, Waveguide discontinuities
- Dispersive media; cf.** Electromagnetic propagation, dispersive media
- Dissipative media; cf.** Absorbing media
- Distortion; cf.** Intermodulation distortion
- Distributed filters; cf.** Microwave filters; Millimeter-wave filters
- Distributed networks**
matching networks for hybrid-coupled phase shifters, *Stariski, J. Piotr, Correction; T-MTT v26 n4 Apr 78 315 (2A02)*
- Distributions**
dyadic Green's function for rectangular guides and cavities; derivation using theory of distributions. *Rahmat-Samii, Y., Correction; T-MTT v26 n1 Jan 78 44 (1D04)*
- Domestic appliances; cf.** Heating appliances
- Doppler measurements**
MIC Doppler module comprised of Ge avalanche diode oscillator and Schottky-barrier detector diode; *Nanbu, Shutarō; T-MTT v26 n3 Mar 78 192-196 (1E02)*
MIC Doppler module with stripline dipole antenna and output radiation normal to substrate plane, *Nanbu, Shutarō; T-MTT v26 n1 Jan 78 3-5 (1A05)*
solid-state detectors for Doppler frequencies 1-1000 Hz; IMPATT, BARITT, and Gunn devices; *Iijima, Y.; T-MTT v26 n2 Feb 78 132-133 (1G02)*

E

- Electromagnetic noise/interference, radiated**
testing using rectangular strip transmission line; characteristic impedance of rectangular lines with thin center conductor and air dielectric; *Weil, Claude M.; T-MTT v26 n4 Apr 78 238-242 (1B02)*
- Electromagnetic analysis**
variational expressions derivation for problems involving coupling between electric and acoustic fields; systematic derivation procedure; *Morishita, Katsumi; T-MTT v26 n9 Sep 78 684-689 (1E02)*
- Electromagnetic coupling; cf.** Apertures; Couplers
- Electromagnetic diffraction**
blazed grating as frequency-selective element in multiplexer; *Henry, Paul S., T-MTT v26 n6 Jun 78 428-433 (1D08)*
resonators, unstable open, edge diffraction calculation using ray optical technique, *Sanjana, Carlos; T-MTT v26 n2 Feb 78 101-108 (1D13)*
slab periodic medium bounded by different media on both sides, modal theory *Chu, Ruey-Shu, Correction; T-MTT v26 n3 Mar 78 216 (1F12)*
slit in conducting plane of finite thickness filled with lossy material, TE case, *Auckland, David T.; T-MTT v26 n7 Jul 78 499-505 (1D03)*
- Electromagnetic measurements; cf.** Dielectric measurements, Electromagnetic radiation effects, Microwave measurements; Millimeter-wave measurements, Optical measurements; Probe antennas
- Electromagnetic propagation; cf.** Electromagnetic surface-wave propagation; Radio propagation, Waveguides
- Electromagnetic propagation, absorbing media; cf.** Electromagnetic radiation effects
- Electromagnetic propagation, absorbing media**
slit in conducting plane of finite thickness filled with lossy material, TE case, *Auckland, David T.; T-MTT v26 n7 Jul 78 499-505 (1D03)*
- Electromagnetic propagation, anisotropic media; cf.** Optical propagation, anisotropic media

Electromagnetic propagation, anisotropic media

microstrip on anisotropic substrates: *Alexopoulos, Nicolaos G.*; *T-MTT v26 n6 Jun 78 387-393 (1A09)*

microstrip with anisotropic substrate; Green's function obtained using image coefficient method; capacitance calculation: *Kobayashi, Masanori*; *T-MTT v26 n2 Feb 78 119-126 (1F03)*

Electromagnetic propagation, dispersive media; cf. Optical propagation, dispersive media; Transmission lines; Waveguides

Electromagnetic propagation, dispersive media

microstrip parameter computation, single and coupled lines; high-speed procedure: *Jansen, R. H., Correction*; *T-MTT v26 n3 Mar 78 216 (1F12)*

microstrip parameters computation, single and coupled lines, high-speed procedure: *Jansen, Rolf H.*; *T-MTT v26 n2 Feb 78 75-82 (1C01)*

slab periodic medium bounded by different media on both sides: modal theory. *Chu, Ruey-Shi, Correction*; *T-MTT v26 n3 Mar 78 216 (1F12)*

Electromagnetic propagation, magnetic media; cf. Ferrite-loaded waveguides; Magnetostatic surface waves

Electromagnetic propagation, nonhomogeneous media; cf. Electromagnetic radiation effects; Optical propagation, nonhomogeneous media; Waveguides

Electromagnetic propagation, nonhomogeneous media

microstrip, multiple conductors on various interfaces; propagation characteristics calculation using spectral domain method. *Itoh, Tatsuo*; *T-MTT v26 n12 Dec 78 983-987 (1E05)*

microstrip with multilayered dielectric structures; Green's function determination: *Crampagne, Raymond*; *T-MTT v26 n2 Feb 78 82-87 (1C08)*

multiconductor transmission lines with inhomogeneous dielectrics, characteristic admittance matrix: *Sun, Y. Y.*; *T-MTT v26 n11 Nov 78 915-918 (1F02)*

slab of graded-index medium whose refractive index is polynomial expression of transverse coordinate: *Pratesi, Riccardo*; *T-MTT v26 n11 Nov 78 856-858 (1A14)*

slab periodic medium bounded by different media on both sides: modal theory. *Chu, Ruey-Shi, Correction*; *T-MTT v26 n3 Mar 78 216 (1F12)*

submillimeter-wave phase shifters: multilayer dielectric waveguide driven by p-i-n diode. *Buckman, A. B., Correction*; *T-MTT v26 n2 Feb 78 127 (1F11)*

YIG slab having periodically corrugated surface: magnetostatic-wave propagation. *Tsutsumi, Makoto, Correction*; *T-MTT v26 n5 May 78 374 (1D14)*

Electromagnetic radiation effects

testing using rectangular strip transmission line: characteristic impedance of rectangular lines with thin center conductor and air dielectric: *Weil, Claude M.*; *T-MTT v26 n4 Apr 78 238-242 (1B02)*

Electromagnetic radiation effects, biological; cf. Electromagnetic radiation therapy

Electromagnetic radiation effects, biological

cranial structure inhomogeneous spherical model in near-field of 3-GHz loop or dipole antennas: heat potential distribution: *Hizal, Altunkan*; *T-MTT v26 n8 Aug 78 607-612 (1G09)*

dielectric obstacles inside rectangular waveguide, three-dimensional arbitrarily shaped obstacles; analysis using dyadic Green's function: *Wang, Johnson J. H.*; *T-MTT v26 n7 Jul 78 457-462 (1A03)*

isolated nerve and muscle preparations: 2450-MHz irradiation. *Chou, Chung-Kwang*; *T-MTT v26 n3 Mar 78 141-147 (1A07)*

microwave Gaussian beam launcher for exposure studies: circular waveguide illuminates dielectric sphere lens: *Neelakantaswamy, Perambur S.*; *T-MTT v26 n9 Sep 78 665-666 (1C11)*

microwaves in medicine; special issue: *T-MTT v26 n8 Aug 78 517-626 (1A03)*

millimeter-wave transmission through normal and tumor cells: standing waves. *Hershberger, W. D.*; *T-MTT v26 n8 Aug 78 618-619 (2A06)*

probes in finite heterogeneous biological bodies, response of insulated spherical probes: *Mousavinezhad, Seyed Hossein*; *T-MTT v26 n8 Aug 78 599-607 (1G01)*

tumor detection; thermographic detection enhancement using microwave heating: *Thompson, J. E.*; *T-MTT v26 n8 Aug 78 573-580 (1E03)*

Electromagnetic radiation effects, biological

absorption in prolate spheroids; calculation by point-matching method. *Ruppin, R.*; *T-MTT v26 n2 Feb 78 87-90 (1C13)*

microwaves in medicine; special issue foreword. *Guy, Arthur W., Guest ed.*; *T-MTT v26 n8 Aug 78 517-518 (1A03)*

Electromagnetic radiation protection, biological

microwave power transmission; antenna design and safety considerations: *Dickinson, Richard M.*; *T-MTT v26 n5 May 78 335-340 (1B03)*

Electromagnetic radiation therapy

cancer treatment; special issue: *T-MTT v26 n8 Aug 78 517-626 (1A03)*

cancer treatment; special issue foreword: *Guy, Arthur W., Guest ed.*; *T-MTT v26 n8 Aug 78 517-518 (1A03)*

cutaneous tumors; 27.12-MHz selective heating. *Antich, Peter P.*; *T-MTT v26 n8 Aug 78 569-572 (1D13)*

microwave direct-contact applicator for 2450 MHz. *Kantor, Gideon*; *T-MTT v26 n8 Aug 78 563-568 (1D07)*

microwave hyperthermia dose definition. *Atkinson, E. Ronald*; *T-MTT v26 n8 Aug 78 595-598 (1F11)*

tumor growth in mice inhibited by 3000-MHz radiation, polyribonucleic-polyribocytidylic, and mouse interferon: *Sznugielski, Stanislaw*; *T-MTT v26 n8 Aug 78 520-522 (1A06)*

tumor therapy at 27.12 MHz: *Overgaard, Jens*; *T-MTT v26 n8 Aug 78 523-529 (1A09)*

tumors; microwave applicator system for small animals: *Baker, Robert J.*; *T-MTT v26 n8 Aug 78 541-545 (1B13)*

tumors; microwave hyperthermia of mouse cancers; applicator and free-field techniques at 2450 MHz: *Robinson, J. Eugene*; *T-MTT v26 n8 Aug 78 546-549 (1C04)*

tumors; microwave therapy, hyperthermia, and L-ascorbic acid effect on Ehrlich ascites carcinoma cell metabolism: *Piontek, Gerald E.*; *T-MTT v26 n8 Aug 78 535-540 (1B07)*

tumors; 2450-MHz radiation used in conjunction with gamma-ray therapy on flour beetle: *Lai, Ping-Kwong*; *T-MTT v26 n8 Aug 78 530-534 (1B02)*

UHF (915 MHz) direct-contact applicator for deep-tissue heating in humans: clinical evaluation: *Lehmann, Justus F.*; *T-MTT v26 n8 Aug 78 556-563 (1C14)*

UHF (915 MHz) direct-contact applicator for heating deep tissues: *Guy, Arthur W.*; *T-MTT v26 n8 Aug 78 550-556 (1C08)*

Electromagnetic reflection; cf. Optical reflection**Electromagnetic reflection**

Gaussian beams, multiple reflection in circular cross section: *Shin, Sang-Yung*; *T-MTT v26 n11 Nov 78 845-851 (1A03)*

Electromagnetic scattering; cf. Transmission-line discontinuities; Waveguide discontinuities

Electromagnetic scattering

dielectric bodies; moment-method convergence improvement using interpolants: *Hagmann, Mark J.*; *T-MTT v26 n11 Nov 78 904-908 (1E06)*

spheres; Mie series solution; computer program: *Mautz, Joseph R.*; *T-MTT v26 n5 May 78 375 (1E01)*

Electromagnetic surface waves; cf. Magnetostatic surface waves; Optical surface waves

Electromagnetic surface-wave waveguides; cf. Dielectric waveguides

Electromagnetic surface-wave waveguides

open-ring line consisting of equally spaced metallic rings: *Fray, Claude*; *T-MTT v26 n11 Nov 78 886-892 (1D02)*

Electron radiation protection

microwave bipolar transistor linear amplifiers for space applications: *Gibson, Maurice H.*; *T-MTT v26 n10 Oct 78 779-788 (1F07)*

Electrooptic modulation

anisotropic media; Green's function obtained using image coefficient method, capacitance calculation: *Kobayashi, Masanori*; *T-MTT v26 n2 Feb 78 119-126 (1F03)*

Electrooptic switches

RF pulse generation using optoelectronic switching in Si: *Proud, Joseph M.*; *T-MTT v26 n3 Mar 78 137-140 (1A03)*

Electrostatic analysis; cf. Capacitance calculations

Electrostatic analysis

nonhomogeneous anisotropic media; Green's function technique: *Kobayashi, Masanori*; *T-MTT v26 n7 Jul 78 510-512 (1D14)*

nonself-adjoint operators; variational formulation derived from standard quadratic functional for self-adjoint operators: *Jeng, Garbo*; *T-MTT v26 n2 Feb 78 91-94 (1D03)*

Extraterrestrial radiation protection

microwave bipolar transistor linear amplifiers for space applications: *Gibson, Maurice H.*; *T-MTT v26 n10 Oct 78 779-788 (1F07)*

F

Far infrared; cf. Infrared (0.70-100 μm); Submillimeter-wave (300-3000 GHz)

Ferrites; cf. Magnetostatic surface waves

Ferrite circulators; cf. Microstrip circulators; Stripline circulators

Ferrite circulators

high peak power differential phase shift circulators; biasing at direct magnetic field between subsidiary and main resonances: *Helszajn, Joseph*; *T-MTT v26 n9 Sep 78 653-658 (1B13)*

symmetrical 4-ports; eigenadmittance condition for perfect circulation to be obtainable by matching alone: *Riblet, Gordon P.*; *T-MTT v26 n4 Apr 78 275-279 (1D11)*

100-kW CW Y-junction waveguide circulator. *Okada, Fumaki*; *T-MTT v26 n5 May 78 364-369 (1D04)*

50-kW CW differential phase-shift circulator at 2450 MHz: *Fournet-Favas, Cristian*; *T-MTT v26 n5 May 78 360-363 (1C14)*

Ferrite devices; cf. YIG devices

Ferrite isolators

thermal stress-induced breakdown in S-band isolator; adhesive layer rupture initiates breakdown: *Buck, Daniel C.*; *T-MTT v26 n5 May 78 357-360 (1C11)*

Ferrite-loaded waveguides

H-plane junction with triangular ferrite post: exact field theory treatment. *Khilla, Abdel-Messias*; *T-MTT v26 n4 Apr 78 279-287 (1E01)*

Ferrite phase shifters

nonreciprocal remanence phase shifters using grooved waveguide: *Mizobuchi, Akihito*; *T-MTT v26 n12 Dec 78 1012-1016 (1G06)*

FETs; cf. Microwave FETs

FET integrated circuits, analog

GaAs FET oscillator with BaO-TiO₂ ceramic resonator, high-stability low-noise: *Abe, Hiroyuki*; *T-MTT v26 n3 Mar 78 156-162 (1B08)*

FET oscillators; cf. Microwave FET oscillators

Fiber optics; cf. Optical fibers

Filters; cf. Acoustic surface-wave filters; Bandpass filters; Channel bank filters; Directional filters; Microwave filters; Millimeter-wave filters; Tunable filters

Finite-element methods

microstrip discontinuity inductance calculation: *Neale, Brian M.*; *T-MTT v26 n10 Oct 78 827-831 (2C05)*

optical fibers, radially inhomogeneous; vectorial wave analysis: *Okamoto, Katsumari*; *T-MTT v26 n2 Feb 78 109-114 (1E07)*

Finline; cf. Microwave integrated circuits; Millimeter-wave integrated circuits

FM broadcast receivers

satellite broadcast receiver for 12-GHz band; low-noise low-cost receiver: *Konishi, Yoshihiro*; *T-MTT v26 n10 Oct 78 720-725 (1B04)*

FM noise; cf. Oscillator noise

FM oscillators

linear FM ramp generator for long-range imaging radar; 1000-MHz bandwidth and 250- μs duration: *Bromagham, Dan R.*; *T-MTT v26 n5 May 78 322-325 (1A04)*

FM pulse compression; cf. Chirp modulation

Fourier transforms

microstrip capacitance upper bound calculation using variational method and spectral domain approach. *Araki, Kiyomichi*; *T-MTT v26 n7 Jul 78 506-509 (1D10)*

Frequency conversion; cf. Microwave frequency conversion; Millimeter-wave frequency conversion; Mixers

Frequency conversion

intermodulation noise analysis using Volterra series: *Swerdlow, Richard B.*; *T-MTT v26 n4 Apr 78 305-313 (1F13)*

Frequency-division multiplexing; cf. Channel bank filters

Frequency-division multiplexing

blazed diffraction grating as frequency-selective element: *Henry, Paul S.*; *T-MTT v26 n6 Jun 78 428-433 (1D08)*

Frequency-scanned arrays

millimeter-wave array consisting of silicon dielectric rectangular rod with periodic metallic stripe perturbations on one side: *Klohn, Kenneth L.*; *T-MTT v26 n10 Oct 78 764-773 (1E06)*

Frequency stability; cf. Oscillator stability

G

- Gallium alloys/compounds, devices; cf.** Avalanche diodes, Gunn devices; IMPATT diodes; Microwave FETs; Schottky-barrier devices
- Gallium alloys/compounds, devices**
tunnel injection transit time diode operating from 100 to 248 GHz; GaAs diodes; *Nishizawa, Jun-ichi; T-MTT v26 n12 Dec 78 1029-1035 (2A13)*
- Gamma-ray therapy**
tumors; 2450-MHz radiation used in conjunction with gamma-ray therapy on flour beetle; *Lai, Ping-Kwong; T-MTT v26 n8 Aug 78 530-534 (1B02)*
- Gas discharges; cf.** Arc discharges
- Gas-discharge devices; cf.** Glow-discharge devices
- Gaussian beams**
microwave Gaussian beam launcher for biological irradiation studies; circular waveguide illuminates dielectric sphere lens; *Neelakantaswamy, Perambur S.; T-MTT v26 n9 Sep 78 665-666 (1C11)*
multiple reflection in circular cross section; *Shin, Sang-Yung; T-MTT v26 n11 Nov 78 845-851 (1A03)*
- Geometrical optics**
resonators, unstable open; edge diffraction calculation using ray optical technique; *Santana, Carlos; T-MTT v26 n2 Feb 78 101-108 (1D13)*
- Germanium devices**
MIC Doppler module comprised of Ge avalanche diode oscillator and Schottky-barrier detector diode; *Nanbu, Shutaro; T-MTT v26 n3 Mar 78 192-196 (1E02)*
- Glow-discharge devices**
X-band radiation detection using neon indicator lamps; very high sensitivity detection; *Makover, Yaakov; T-MTT v26 n1 Jan 78 38-43 (1C12)*
- Green's function**
anisotropic media; Green's function obtained using image coefficient method; capacitance calculation for microstrip and electrooptic modulator; *Kobayashi, Masanori; T-MTT v26 n2 Feb 78 119-126 (1F03)*
dielectric obstacles inside rectangular waveguide, three-dimensional arbitrarily shaped obstacles; analysis using dyadic Green's function; *Wang, Johnson J. H.; T-MTT v26 n7 Jul 78 457-462 (1A03)*
dyadic Green's function for rectangular guides and cavities; derivation using theory of distributions. *Rahmat-Samu, Y.; Correction; T-MTT v26 n1 Jan 78 44 (1D04)*
electrostatic field problems involving nonhomogeneous anisotropic media. *Kobayashi, Masanori; T-MTT v26 n7 Jul 78 510-512 (1D14)*
microstrip: space-domain frequency-dependent dyadic Green's function; *Chow, Y. L.; T-MTT v26 n12 Dec 78 978-983 (1D14)*
microstrip with multilayered dielectric structures; *Crampagne, Raymond; T-MTT v26 n2 Feb 78 82-87 (1C08)*
wire inside rectangular cavity excited by external sources coupled to interior by aperture in cavity wall; current excited on wire; *Seidel, David B.; T-MTT v26 n11 Nov 78 908-914 (1E10)*
- Gunn devices**
Doppler detectors for Doppler frequencies 1-1000 Hz; *Ijuma, Y.; T-MTT v26 n2 Feb 78 132-133 (1G02)*
surface-oriented transferred-electron devices using MESFET technology; *Shur, Michael S.; T-MTT v26 n12 Dec 78 1023-1028 (2A07)*
- Gunn device oscillators**
injection-locked pulsed oscillators with very fast switching characteristics; phase and amplitude transients; *Pavlidis, Dimitrios; T-MTT v26 n3 Mar 78 162-169 (1B14)*
magnetically tunable oscillator using YIG resonator with isolator property. *Okada, Fumiaki; T-MTT v26 n12 Dec 78 1035-1039 (2B05)*
transmission cavity stabilized oscillators; matching; *Schunemann, Klaus; T-MTT v26 n3 Mar 78 147-155 (1A13)*

H

- Head**
electromagnetic irradiation of cranial structure, inhomogeneous spherical model in near-field of 3-GHz loop or dipole antennas; heat potential distribution; *Hizal, Altunkan; T-MTT v26 n8 Aug 78 607-612 (1G09)*
- Heating appliances; cf.** Microwave heating
- Horn antennas**
fed from circular TE₀₁-mode guide; pencil beam formation; *Wengenroth, Robert D.; T-MTT v26 n5 May 78 332-334 (1A14)*
monopulse tracking feed for long-range imaging radar; high-power X-band feed; *Goudey, Kenneth R.; T-MTT v26 n5 May 78 326-332 (1A08)*
- Hybrid integrated-circuits; cf.** Microwave integrated circuits, Millimeter-wave integrated circuits
- Hybrid junctions**
high-power switching network for dual-mode antenna; *Albanese, Victor J.; T-MTT v26 n5 May 78 348-354 (1C02)*
symmetrical 4-ports; eigenadmittance condition for 90° hybrids to be obtainable by matching alone; *Riblet, Gordon P.; T-MTT v26 n4 Apr 78 275-279 (1D11)*

I

- IC; cf.** Integrated circuits
- IEEE Microwave Theory and Techniques Society**
changes in *Transactions* during previous three years; *Parker, Don; T-MTT v26 n1 Jan 78 1 (1A03)*
editorial policy; *Allen, James Lamar, Ed.; T-MTT v26 n1 Jan 78 2 (1A04)*
- IEEE Microwave Theory and Techniques Society**
awards for 1977; *Rodrigue, G. P.; T-MTT v26 n12 Dec 78 932-934 (1A10)*
- Imaging; cf.** Radar imaging
- IMPATT diodes**
Doppler detectors for Doppler frequencies 1-1000 Hz; *Ijuma, Y.; T-MTT v26 n2 Feb 78 132-133 (1G02)*
traveling-wave mode in distributed structure; *Franz, Michael; T-MTT v26 n11 Nov 78 861-865 (1B05)*

IMPATT diode amplifiers

- mode locking at X-band using IMPATT diode as gain element and Schottky-barrier diode as saturable absorber; *Glasser, Lance A.; T-MTT v26 n2 Feb 78 62-69 (1B02)*
up-conversion characteristics determination; *Gupta, Ramesh K.; T-MTT v26 n1 Jan 78 28-30 (1C02)*
- IMPATT diode oscillators, millimeter-wave**
cavity stabilization and electronic tuning by parametric interaction; *Okamoto, Hiroshi; T-MTT v26 n6 Jun 78 420-424 (1C14)*
high-stability low-noise oscillator at 75 GHz using injection locking and AFC with crystal oscillator as reference; *Okamoto, Hiroshi; T-MTT v26 n2 Feb 78 136 (1G06)*
highly stable low-noise 75-GHz oscillator using parametric injection locking and AFC; *Okamoto, Hiroshi; T-MTT v26 n8 Aug 78 627-628 (2B01)*
- Impedance matching**
circulators and hybrids, symmetrical 4-ports, eigenadmittance condition for perfect circulation or 90° hybrids to be obtainable by matching alone; *Riblet, Gordon P.; T-MTT v26 n4 Apr 78 275-279 (1D11)*
microwave oscillators stabilized by transmission cavity; *Schunemann, Klaus; T-MTT v26 n3 Mar 78 147-155 (1A13)*
phase shifters, hybrid-coupled; transmission-line matching networks. *Stariski, J. Piotr; Correction; T-MTT v26 n4 Apr 78 315 (2A02)*
twoport with mismatched source and load and/or arbitrary reference planes; bounds on reflection coefficient amplitude; *Tromp, H.; T-MTT v26 n12 Dec 78 973-978 (1D09)*
- Inductance calculations**
microstrip discontinuities; finite-element method; *Neale, Brian M.; T-MTT v26 n10 Oct 78 827-831 (2C05)*
- Inductance measurement**
microwave transistor mounted in microstrip; parasitic reactances measurement using resonance method; *Beneking, H.; T-MTT v26 n1 Jan 78 43 (1D03)*
- Infrared (0.70-100 μm); cf.** Submillimeter-wave (300-3000 GHz)
- Infrared detectors**
Schottky-barrier diode cutoff frequencies; Si and GaAs diodes; *Champlin, Keith S.; T-MTT v26 n1 Jan 78 31-34 (1C05)*
- Infrared imaging**
tumor detection; thermographic detection enhancement using microwave heating; *Thompson, J. E.; T-MTT v26 n8 Aug 78 573-580 (1E03)*
- Infrared mixers**
Schottky-barrier diode cutoff frequencies; Si and GaAs diodes. *Champlin, Keith S.; T-MTT v26 n1 Jan 78 31-34 (1C05)*
- Inhomogeneous; cf.** Nonhomogeneous
- Injection-locked oscillators**
IMPATT diode oscillator at 75 GHz; high-stability low-noise oscillator using injection locking and AFC with crystal oscillator as reference. *Okamoto, Hiroshi; T-MTT v26 n2 Feb 78 136 (1G06)*
IMPATT oscillator at 75 GHz; highly stable low-noise oscillator using parametric injection locking and AFC. *Okamoto, Hiroshi; T-MTT v26 n8 Aug 78 627-628 (2B01)*
millimeter-wave IMPATT oscillators; cavity stabilization and electronic tuning by parametric interaction; *Okamoto, Hiroshi; T-MTT v26 n6 Jun 78 420-424 (1C14)*
pulsed oscillators with very fast switching characteristics; phase and amplitude transients; *Pavlidis, Dimitrios; T-MTT v26 n3 Mar 78 162-169 (1B14)*
- Integral equations; cf.** Moment methods; Variational methods
- Integral equations**
coaxial line of rectangular cross section with offset inner conductor, characteristic impedance; *Tippet, John C.; T-MTT v26 n11 Nov 78 876-883 (1C06)*
nonself-adjoint operators; variational formulation derived from standard quadratic functional for self-adjoint operators; *Jeng, Garbo; T-MTT v26 n2 Feb 78 91-94 (1D03)*
wire inside rectangular cavity excited by external sources coupled to interior by aperture in cavity wall; current excited on wire; *Seidel, David B.; T-MTT v26 n11 Nov 78 908-914 (1E10)*
- Integrated circuits; cf.** Microwave integrated circuits; Millimeter-wave integrated circuits
- Intermodulation distortion**
frequency converter analysis using Volterra series; *Swerdlow, Richard B.; T-MTT v26 n4 Apr 78 305-313 (1F13)*
- International Microwave Symposium; cf.** Microwave Symposium, IEEE MTT-S International, Ottawa, Canada, 1978
- Interpolation**
moment-method convergence improvement using interpolants. *Hagmann, Mark J.; T-MTT v26 n11 Nov 78 904-908 (1E06)*
- Irises; cf.** Waveguide discontinuities
- Isolators; cf.** Ferrite isolators

J

- Johnson, Carl C.**
obituary; *Justesen, Don R.; T-MTT v26 n8 Aug 78 519 (1A05)*
- Junctions; cf.** Hybrid junctions; Waveguide junctions

L

- Layered media; cf.** Nonhomogeneous media
- Leaky-wave antennas**
electronically scannable antennas integrated in quasi-planar dielectric waveguide; *Itoh, Tatsuo; T-MTT v26 n12 Dec 78 987-991 (1E09)*
- Least-squares approximation**
microwave two-port noise parameters determination using least-squares method. *Caruso, Giuseppe; T-MTT v26 n9 Sep 78 639-642 (1A13)*
- Lenses**
microwave Gaussian beam launcher for biological irradiation studies; circular waveguide illuminates dielectric sphere lens; *Neelakantaswamy, Perambur S.; T-MTT v26 n9 Sep 78 665-666 (1C11)*
- Light; cf.** Optical

Light-triggered switches

RF pulse generation using optoelectronic switching in Si; *Proud, Joseph M.*; *T-MTT v26 n3 Mar 78 137-140 (1A03)*

Limiting; cf. Microwave limiters

Linear FM; cf. Chirp modulation

Loaded waveguides; cf. Dielectric-loaded waveguides; Ferrite-loaded waveguides

Locked oscillators; cf. Injection-locked oscillators

M**Magnetic resonance**

ferrite circulators, high peak power differential phase shift circulators, biasing at direct magnetic field between subsidiary and main resonances; *Helszajn, Joseph*; *T-MTT v26 n9 Sep 78 653-658 (1B13)*

Magnetic thermal factors

ferrite isolators, thermal stress-induced breakdown; adhesive layer rupture initiates breakdown; *Buck, Daniel C.*; *T-MTT v26 n5 May 78 357-360 (1C11)*

Magnetostatic surface waves

curved ferrite surfaces; propagation characteristics; *Srivastava, Neeraj C.*; *T-MTT v26 n4 Apr 78 252-256 (1C02)*

microstrip-excited surface waves; radiation impedance calculation; *Ganguly, Achintya K.*; *T-MTT v26 n6 Jun 78 444-447 (1E10)*

thin dielectric slab between oppositely magnetized ferrites; *Srivastava, N. C.*; *T-MTT v26 n3 Mar 78 213-215 (1F09)*

YIG slab having periodically corrugated surface. *Tsutsumi, Makoto, Correction*; *T-MTT v26 n5 May 78 374 (1D14)*

Magnetostatic volume waves

shallow grooved grating on YIG film; reflection characteristics. *Parekh, Jayantkumar P.*; *T-MTT v26 n12 Dec 78 1039-1044 (2B09)*

Matching; cf. Impedance matching

Materials testing

ceramic materials; electromagnetic millimeter waves for detecting and locating defects; *Bahr, Alfred J.*; *T-MTT v26 n9 Sep 78 676-683 (1D08)*

Matrices; cf. Moment methods

Measurement; cf. Acoustic measurements; Electromagnetic measurements; Optical measurements; Semiconductor device measurements

MESFETs; cf. Microwave FETs

Meteorological factors; cf. Radio propagation meteorological factors

MIC; cf. Microwave integrated circuits

Microstrip

anisotropic substrates; covered single and coupled microstrip; *Alexopoulos, Nicolaos G.*; *T-MTT v26 n6 Jun 78 387-393 (1A09)*

anisotropic substrates; Green's function obtained using image coefficient method; capacitance calculation; *Kobayashi, Masanori*; *T-MTT v26 n2 Feb 78 119-126 (1F03)*

capacitance upper bound calculation using variational method and spectral domain approach; *Araki, Kiyomichi*; *T-MTT v26 n7 Jul 78 506-509 (1D10)*

characteristic impedance definitions for uniform microstrip; frequency dependence of characteristic impedance; *Bianco, Bruno*; *T-MTT v26 n3 Mar 78 182-185 (1D06)*

coupled suspended lines with tuning septums; generalized spectral domain analysis; *Itoh, Tatsuo*; *T-MTT v26 n10 Oct 78 820-827 (2B12)*

cylindrical and cylindrically warped lines; impedance calculation; *Wang, Yen-Chu*; *T-MTT v26 n1 Jan 78 20-23 (1B08)*

disk networks; impedance matrix of multipoint with fringing fields at disk edge; *Bonetti, René R.*; *T-MTT v26 n7 Jul 78 471-477 (1B03)*

Green's function in space domain, frequency-dependent dyadic Green's function; *Chow, Y. L.*; *T-MTT v26 n12 Dec 78 978-983 (1D14)*

inhomogeneous coupled lines; design charts; *Ros, Alain E.*; *T-MTT v26 n6 Jun 78 394-400 (1B02)*

magnetostatic surface-wave excitation using microstrip; radiation impedance calculation; *Ganguly, Achintya K.*; *T-MTT v26 n6 Jun 78 444-447 (1E10)*

measuring attenuation; frequency-domain shuttle-pulse method. *Bernardi, Paolo*; *T-MTT v26 n3 Mar 78 203-209 (1E13)*

multilayered dielectric structures; Green's function determination; *Crampagne, Raymond*; *T-MTT v26 n2 Feb 78 82-87 (1C08)*

multiple conductors on various interfaces, propagation characteristics calculation using spectral domain method; application to suspended microstrip with tuning septums; *Itoh, Tatsuo*; *T-MTT v26 n12 Dec 78 983-987 (1E05)*

nonhomogeneous anisotropic media; Green's function technique; *Kobayashi, Masanori*; *T-MTT v26 n7 Jul 78 510-512 (1D14)*

parameters computation for single and coupled lines; high-speed computation; *Jansen, Rolf H.*; *T-MTT v26 n2 Feb 78 75-82 (1C01)*

parameters computation for single and coupled lines high-speed computation. *Jansen, R. H., Correction*; *T-MTT v26 n3 Mar 78 216 (1F12)*

thick- and thin-film technologies compared; alumina and fused silica substrates; *Ramy, Jean-Pierre*; *T-MTT v26 n10 Oct 78 814-820 (2B06)*

tolerance analysis using sensitivity approach; *Garg, Ramesh*; *T-MTT v26 n1 Jan 78 16-19 (1B04)*

Microstrip circuits

amplifiers; I²-W GaAs Read-diode amplifier at X-band; *Tserng, Hua Quen*; *T-MTT v26 n10 Oct 78 774-778 (1F02)*

transistor package mounted in microstrip; parasitic reactances measurement using resonance method; *Beneking, H.*; *T-MTT v26 n1 Jan 78 43 (1D03)*

Microstrip circulators, ferrite

Y-junction circulators; frequency behavior; *Ayter, Sevgi*; *T-MTT v26 n3 Mar 78 197-202 (1E07)*

Microstrip couplers

cavity resonator-microstrip coupling through aperture in substrate ground plane; *Kumar, Mahesh*; *T-MTT v26 n9 Sep 78 690-691 (1E08)*

Microstrip directional couplers

dielectric overlay coupler design using spectral domain techniques; *Paolino, Donald D.*; *T-MTT v26 n9 Sep 78 646-649 (1B06)*

interdigitated coupler design. *Kajfez, Darko*; *T-MTT v26 n10 Oct 78 806-808 (2A12)*

interdigitated coupler design; *Presser, Adolph*; *T-MTT v26 n10 Oct 78 801-805 (2A07)*

interdigitated coupler design; *Rizzoli, Vittorio*; *T-MTT v26 n1 Jan 78 7-15 (1A09)*

interdigitated 3-dB coupler on alumina substrate with three strips and two bond wires; *Tulaja, Volker*; *T-MTT v26 n9 Sep 78 643-645 (1B03)*

multistrip quadrature couplers; interdigitated couplers; *Tajima, Yusuke*; *T-MTT v26 n10 Oct 78 795-801 (2A01)*

sensitivity analysis of coupled-line couplers; sensitivities of parameters with respect to even- and odd-mode impedances; *Shamasundara, Sriripuram D.*; *T-MTT v26 n10 Oct 78 788-794 (1G02)*

slot-strip couplers; improving isolation of 3-dB couplers by lengthening slotline; *Schiek, Burkhard*; *T-MTT v26 n1 Jan 78 5-7 (1A07)*

Microstrip discontinuities

bends and Y-junctions of arbitrary angles; scattering parameters calculations; *Mehran, Reza*; *T-MTT v26 n6 Jun 78 400-405 (1B08)*

bends; symmetric bends and their compensation; *Douville, Rene J. P.*; *T-MTT v26 n3 Mar 78 175-182 (1C13)*

capacitance calculation; quasi-static formulation; *Gopinath, A.*; *T-MTT v26 n10 Oct 78 831-836 (2C09)*

end and gap effects measurement; resonant technique; *Gupta, Chandra*; *T-MTT v26 n9 Sep 78 649-652 (1B09)*

inductance calculation using finite-element method; *Neale, Brian M.*; *T-MTT v26 n10 Oct 78 827-831 (2C05)*

T-junctions, unsymmetric; scattering parameters calculation, computer program; *Menzel, W.*; *T-MTT v26 n3 Mar 78 217 (1F13)*

Y junction radiation as function of angle and substrate dielectric constant and thickness; *Lewin, Leonard*; *T-MTT v26 n11 Nov 78 893-894 (1D09)*

Microstrip filters

parallel coupled lines in nonhomogeneous medium; *Pompei, Dominique*; *T-MTT v26 n4 Apr 78 231-238 (1A09)*

Microstrip resonators

planar triangular resonators with magnetic walls; *Helszajn, Joseph*; *T-MTT v26 n2 Feb 78 95-100 (1D07)*

ring resonators; resonant frequencies computation using reaction concept. *Pintzos, Sotirios G.*; *T-MTT v26 n10 Oct 78 809-813 (2B01)*

Microstrip transitions

cavity resonator-microstrip coupling through aperture in substrate ground plane; *Kumar, Mahesh*; *T-MTT v26 n9 Sep 78 690-691 (1E08)*

Microwave (3-30 GHz); cf. Millimeter-wave (30-300 GHz)

Microwave amplifiers; cf. Avalanche diode amplifiers; IMPATT diode amplifiers; Microwave bipolar transistor amplifiers; Reflection amplifiers

Microwave antennas; cf. Specific type

Microwave antennas

power transmission; antenna design and safety considerations; *Dickinson, Richard M.*; *T-MTT v26 n5 May 78 335-340 (1B03)*

Microwave bipolar transistors

microstrip-mounted package; parasitic reactances measurement using resonance method. *Beneking, H.*; *T-MTT v26 n1 Jan 78 43 (1D03)*

scattering parameters measurement; large-signal S-parameters measurement using two-signal method; *Mazumder, Shamsur R.*; *T-MTT v26 n6 Jun 78 417-420 (1C11)*

Microwave bipolar transistor amplifiers

radiation protection of linear amplifiers for space applications; *Gibson, Maurice H.*; *T-MTT v26 n10 Oct 78 779-788 (1F07)*

Microwave circuits; cf. Specific type**Microwave circuits**

noise, two-port noise parameters determination using least-squares method; *Caruso, Giuseppe*; *T-MTT v26 n9 Sep 78 639-642 (1A13)*

two-port with mismatched source and load and/or arbitrary reference planes, bounds on reflection coefficient amplitude; *Tromp, H.*; *T-MTT v26 n12 Dec 78 973-978 (1D09)*

Microwave detectors

neon indicator lamps for very high sensitivity detection of X-band radiation; *Makover, Yaakov*; *T-MTT v26 n1 Jan 78 38-43 (1C12)*

Microwave devices

high-power microwaves; special issue; *T-MTT v26 n5 May 78 321-374 (1A03)*

high-power microwaves; special issue foreword; *Tomyasu, Kiyo, Guest ed.*; *T-MTT v26 n5 May 78 321 (1A03)*

noise properties of linear devices; wave approach; *Meys, R. P.*; *T-MTT v26 n1 Jan 78 34-37 (1C08)*

Microwave diodes; cf. Microwave amplifiers; Microwave mixers; Microwave oscillators**Microwave diodes**

measurement; de-embedding errors, bounds; *Glasser, Lance A.*; *T-MTT v26 n5 May 78 379-380 (1E05)*

Microwave FETs

microstrip-mounted package; parasitic reactances measurement using resonance method; *Beneking, H.*; *T-MTT v26 n1 Jan 78 43 (1D03)*

nonlinear performance prediction for GaAs FETs; *Willing, Harry A.*; *T-MTT v26 n12 Dec 78 1017-1023 (2A01)*

Microwave FET oscillators

GaAs FET integrated oscillator with BaO-TiO₂ ceramic resonator; high-stability low-noise; *Abe, Hiroyuki*; *T-MTT v26 n3 Mar 78 156-162 (1B08)*

Microwave filters; cf. Cavity-resonator filters; Directional filters; Impedance matching; Microstrip filters; Waveguide filters**Microwave filters**

planar circuit transmission zeros; analysis based on expansion in resonant modes; *D'Inzeo, Guglielmo*; *T-MTT v26 n7 Jul 78 462-471 (1A08)*

Microwave frequency conversion; cf. Microwave mixers**Microwave frequency conversion**

frequency division using harmonically synchronized oscillators; noise and transfer properties; *Knochel, Reinhard*; *T-MTT v26 n12 Dec 78 939-944 (1B03)*

IMPATT amplifier up-conversion characteristics determination; *Gupta, Ramesh K.*; *T-MTT v26 n1 Jan 78 28-30 (1C02)*

intermodulation noise analysis using Volterra series; *Swerdlow, Richard B.*; *T-MTT v26 n4 Apr 78 305-313 (1F13)*

Microwave generation; cf. Microwave oscillators**Microwave generation**

power generation using $\lambda/4$ transmission-line resonator containing spark gap; *Ristic, Velimir M.*; *T-MTT v26 n5 May 78 369-374 (1D09)*

Microwave heating; cf. Electromagnetic radiation effects**Microwave heating**

oven mode tuning by slab dielectric loads; *Mihran, Theodore G.*; *T-MTT v26 n6 Jun 78 381-387 (1A03)*

Microwave integrated circuits; cf. Microstrip; Slotline; Stripline

Microwave integrated circuits

Doppler module comprised of Ge avalanche diode oscillator and Schottky-barrier detector diode; *Nanbu, Shutaro*; *T-MTT v26 n3 Mar 78* 192-196 (1E02)

Doppler module with stripline dipole antenna and output radiation normal to substrate plane; *Nanbu, Shutaro*; *T-MTT v26 n1 Jan 78* 3-5 (1A05)

finline balanced mixer in 9-11 GHz band with 70-MHz IF; *Begemann, Günther*; *T-MTT v26 n12 Dec 78* 1007-1011 (1G01)

GaAs FET oscillator with BaO-TiO₂ ceramic resonator; high-stability low-noise; *Abe, Hiroyuki*; *T-MTT v26 n3 Mar 78* 156-162 (1B08)

planar circuit analysis based on expansion in resonant modes; filtering properties; *D'Inzeo, Guglielmo*; *T-MTT v26 n7 Jul 78* 462-471 (1A08)

planar circuit mounted in waveguide; downconverter for satellite broadcast FM receiver in 12-GHz band; *Konishi, Yoshihiro*; *T-MTT v26 n10 Oct 78* 720-725 (1B04)

planar circuit mounted in waveguide; 12-GHz band downconverter; *Konishi, Yoshihiro*; *T-MTT v26 n10 Oct 78* 716-719 (1A14)

planar disk networks; impedance matrix of multiport with fringing fields at disk edge; *Bonetti, René R.*; *T-MTT v26 n7 Jul 78* 471-477 (1B03)

special issue; *T-MTT v26 n10 Oct 78* 705-842 (1A03)

special issue foreword; *Knerr, Reinhard H., Guest ed.*; *T-MTT v26 n10 Oct 78* 705 (1A03)

SSB modulator pumped at submultiple of carrier frequency; Schottky diode modulator; *Chramiec, Jerzy*; *T-MTT v26 n9 Sep 78* 635-638 (1A09)

thick- and thin-film technologies compared, alumina and fused silica substrates; *Ramy, Jean-Pierre*; *T-MTT v26 n10 Oct 78* 814-820 (2B06)

Microwave limiters

multipactor receiver protectors for airborne applications; 50-kW peak power and 12.5 percent bandwidth in X-band; *Carlisle, Thomas P.*; *T-MTT v26 n5 May 78* 345-347 (1B13)

Microwave measurements; cf. Attenuation measurement; Capacitance measurement; Cavity perturbation methods; Dielectric measurements; Electromagnetic radiation effects; Inductance measurement; Microwave radiometry; *Q* measurement; Scattering parameters measurement; Transmission-line measurements

Microwave measurements

cavity coupling coefficients of transmission-type cavities; swept frequency method; *Magerl, Gottfried*; *T-MTT v26 n3 Mar 78* 223-224 (1G05)

dielectric waveguides; dispersion characteristics and field distributions in rectangular guide and its modifications; *Ogusu, Kazuhiko*; *T-MTT v26 n3 Mar 78* 169-171 (1C07)

loss and mode-conversion measurement; frequency-domain shuttle-pulse method; *Bernardi, Paolo*; *T-MTT v26 n3 Mar 78* 203-209 (1E13)

Microwave mixers

conversion loss and noise; predicting mixer performance, experimental results; *Held, Daniel N.*; *T-MTT v26 n2 Feb 78* 55-61 (1A09)

conversion loss and noise; predicting mixer performance, theory; *Held, Daniel N.*; *T-MTT v26 n2 Feb 78* 49-55 (1A03)

finline technique used in 9-11 GHz balanced mixer with 70-MHz IF; *Begemann, Günther*; *T-MTT v26 n12 Dec 78* 1007-1011 (1G01)

planar circuit mounted in waveguide; downconverter for satellite broadcast FM receiver in 12-GHz band; *Konishi, Yoshihiro*; *T-MTT v26 n10 Oct 78* 720-725 (1B04)

planar circuit mounted in waveguide; 12-GHz band downconverter; *Konishi, Yoshihiro*; *T-MTT v26 n10 Oct 78* 716-719 (1A14)

Microwave modulation

SSB modulator pumped at submultiple of carrier frequency; Schottky diode modulator; *Chramiec, Jerzy*; *T-MTT v26 n9 Sep 78* 635-638 (1A09)

Microwave oscillators; cf. Avalanche diode oscillators; Gunn device oscillators; Injection-locked oscillators; Microwave FET oscillators

Microwave oscillators

linear FM ramp generator for long-range imaging radar; 1000-MHz bandwidth and 250- μ s duration; *Bromaghim, Dan R.*; *T-MTT v26 n5 May 78* 322-325 (1A04)

mode locking at X-band using IMPATT diode as gain element and Schottky-barrier diode as saturable absorber; *Glasser, Lance A.*; *T-MTT v26 n2 Feb 78* 62-69 (1B02)

transmission cavity stabilized oscillators. matching; *Schünemann, Klaus*; *T-MTT v26 n3 Mar 78* 147-155 (1A13)

Microwave ovens; cf. Microwave heating

Microwave power transmission

transmitting antenna design; safety considerations; *Dickinson, Richard M.*; *T-MTT v26 n5 May 78* 335-340 (1B03)

Microwave radiation effects/safety; cf. Electromagnetic radiation...

Microwave radio receivers

FM receiver for satellite broadcasting in 12-GHz band; *Konishi, Yoshihiro*; *T-MTT v26 n10 Oct 78* 720-725 (1B04)

Microwave radiometry

p-i-n diode switch matrix consisting of 8 diodes in stripline package; cryogenically cooled C-band switch for radio astronomy; *Behrens, George H., Jr.*; *T-MTT v26 n9 Sep 78* 629-635 (1A03)

Microwave switches

high-power switching network for dual-mode antenna; *Albanese, Victor J.*; *T-MTT v26 n5 May 78* 348-354 (1C02)

multipactor receiver protectors for airborne applications; 50-kW peak power and 12.5 percent bandwidth in X-band; *Carlisle, Thomas P.*; *T-MTT v26 n5 May 78* 345-347 (1B13)

p-i-n diode switch matrix consisting of 8 diodes in stripline package; cryogenically cooled C-band switch for radio astronomy; *Behrens, George H., Jr.*; *T-MTT v26 n9 Sep 78* 629-635 (1A03)

Microwave Symposium, IEEE MTT-S International, Ottawa, Canada, 1978

editor's overview; *Steenart, Willem, Guest ed.*; *T-MTT v26 n12 Dec 78* 926 (1A04)

selected papers from June 1978 symposium, *T-MTT v26 n12 Dec 78* 925-1051 (1A03)

summary of June 1978 symposium; *Steenart, Willem*; *T-MTT v26 n12 Dec 78* 927-931 (1A05)

Microwave Theory and Techniques Society; cf. IEEE Microwave Theory and Techniques Society

Microwave transistors; cf. Microwave bipolar transistors; Microwave FETs

Millimeter-wave (30-300 GHz); cf. Microwave (3-30 GHz); Submillimeter-wave (300-3000 GHz)

Millimeter-wave antennas

electronically scannable leaky-wave antennas integrated in quasi-planar dielectric waveguide; *Itoh, Tatsuo*; *T-MTT v26 n12 Dec 78* 987-991 (1E09)

fed from circular TE₀₁-mode guide; pencil beam formation; *Wengenroth, Robert D.*; *T-MTT v26 n5 May 78* 332-334 (1A14)

frequency scanning array consisting of silicon dielectric rectangular rod with periodic metallic stripe perturbations on one side; *Klohn, Kenneth L.*; *T-MTT v26 n10 Oct 78* 764-773 (1E06)

Millimeter-wave detectors

dielectric image guide passive devices for IC; *Paul, Jeffrey A.*; *T-MTT v26 n10 Oct 78* 751-754 (1D07)

Millimeter-wave diodes; cf. Millimeter-wave amplifiers, Millimeter-wave mixers; Millimeter-wave oscillators

Millimeter-wave diodes

Schottky-barrier diodes in 75-115 GHz range; avalanche noise; *Keen, Nigel J.*; *T-MTT v26 n10 Oct 78* 843-844 (2D07)

tunnel injection transit time diode operating from 100 to 248 GHz; GaAs diodes; *Nishizawa, Jun-ichi*; *T-MTT v26 n12 Dec 78* 1029-1035 (2A13)

Millimeter-wave filters

dielectric rectangular waveguide used for channel dropping filter; *Itanami, Takao*; *T-MTT v26 n10 Oct 78* 759-764 (1E01)

multiplexer uses blazed diffraction grating as frequency-selective element; *Henry, Paul S.*; *T-MTT v26 n6 Jun 78* 428-433 (1D08)

tunable filters integrated in quasi-planar dielectric waveguide; *Itoh, Tatsuo*; *T-MTT v26 n12 Dec 78* 987-991 (1E09)

Millimeter-wave frequency conversion; cf. Millimeter-wave mixers

Millimeter-wave frequency conversion

multiplexers at 300 and 450 GHz using thin-film IC; *Takada, Tohru*; *T-MTT v26 n10 Oct 78* 733-737 (1C03)

Millimeter-wave integrated circuits

antennas and filters in quasi-planar dielectric waveguide, electronically scannable leaky-wave antenna and tunable filter; *Itoh, Tatsuo*; *T-MTT v26 n12 Dec 78* 987-991 (1E09)

dielectric image guide passive devices, couplers, detectors, and balanced mixers; *Paul, Jeffrey A.*; *T-MTT v26 n10 Oct 78* 751-754 (1D07)

dielectric image lines, electric probe measurements in 26-90 GHz range; *Solbach, Klaus*; *T-MTT v26 n10 Oct 78* 755-758 (1D11)

dielectric image lines; low-loss E₁₁ mode rectangular line; *Shindo, Shuichi*; *T-MTT v26 n10 Oct 78* 747-751 (1D03)

dielectric image lines of rectangular cross section; field distributions and phase constants calculation for single and coupled lines; *Solbach, Klaus*; *T-MTT v26 n4 Apr 78* 266-274 (1D02)

dielectric rectangular waveguide used for channel dropping filter; *Itanami, Takao*; *T-MTT v26 n10 Oct 78* 759-764 (1E01)

finline structures; analysis method; *Saad, Abdel Megid Kamal*; *T-MTT v26 n12 Dec 78* 1002-1007 (1F10)

frequency multipliers at 300 and 450 GHz using thin-film circuits; *Takada, Tohru*; *T-MTT v26 n10 Oct 78* 733-737 (1C03)

mixer in stripline, subharmonically pumped two-diode mixer; *Carlson, Eric R.*; *T-MTT v26 n10 Oct 78* 706-715 (1A04)

planar circuits suspended in E-plane of rectangular guide; *Meier, Paul J.*; *T-MTT v26 n10 Oct 78* 726-733 (1B10)

special issue; *T-MTT v26 n10 Oct 78* 705-842 (1A03)

special issue foreword; *Knerr, Reinhard H., Guest ed.*; *T-MTT v26 n10 Oct 78* 705 (1A03)

Millimeter-wave measurements

biological cells, normal and tumorous; standing-wave patterns; *Hershberger, W. D.*; *T-MTT v26 n8 Aug 78* 618-619 (2A06)

ceramic materials evaluation; detecting and locating defects; *Bahr, Alfred J.*; *T-MTT v26 n9 Sep 78* 676-683 (1D08)

dielectric waveguides of circular cross section; attenuation characteristics in 72-GHz band; *Jablonski, Daniel*; *T-MTT v26 n9 Sep 78* 667-671 (1C13)

earth-space attenuation at 230 GHz; *Wrixon, Gerard T.*; *T-MTT v26 n6 Jun 78* 434-439 (1D14)

subnanosecond switch at 300 Mb/s, 80.99-GHz p-i-n diode modulator, test set displaying transients in polar coordinates; *Bosch, Fridolin*; *T-MTT v26 n1 Jan 78* 24-27 (1B12)

Millimeter-wave mixers

broadband second-harmonic mixer covering 76-106 GHz, uses single Schottky-barrier diode and wave absorber in IF circuit; *Kawasaki, Ryoji*; *T-MTT v16 n6 Jun 78* 425-427 (1D05)

conversion loss and noise, predicting mixer performance, experimental results; *Held, Daniel N.*; *T-MTT v26 n2 Feb 78* 55-61 (1A09)

conversion loss and noise; predicting mixer performance, theory; *Held, Daniel N.*; *T-MTT v26 n2 Feb 78* 49-55 (1A03)

dielectric image guide passive devices for IC; *Paul, Jeffrey A.*; *T-MTT v26 n10 Oct 78* 751-754 (1D07)

GaAs diodes prepared by molecular beam epitaxy for use in cryogenic receiver in 60-90 GHz band; *Linke, R. A.*; *T-MTT v26 n12 Dec 78* 935-938 (1A13)

Schottky-barrier diodes in 75-115 GHz range; avalanche noise; *Keen, Nigel J.*; *T-MTT v26 n10 Oct 78* 843-844 (2D07)

subharmonically pumped two-diode mixer in stripline; *Carlson, Eric R.*; *T-MTT v26 n10 Oct 78* 706-715 (1A04)

Millimeter-wave modulation

p-i-n diode modulator at 80.99 GHz, subnanosecond switching at 300 Mb/s, test set displaying transients in polar coordinates; *Bosch, Fridolin*; *T-MTT v26 n1 Jan 78* 24-27 (1B12)

Millimeter-wave oscillators; cf. IMPATT diode oscillators

Millimeter-wave oscillators

biological systems, coherent oscillations in 10¹⁰-10¹² Hz range; role in controlling tissue growth; *Frohlisch, H.*; *T-MTT v26 n8 Aug 78* 613-617 (2A01)

linear FM ramp generator for long-range imaging radar; 1000-MHz bandwidth and 250- μ s duration; *Bromaghim, Dan R.*; *T-MTT v26 n5 May 78* 322-325 (1A04)

tunnel injection transit time diode operating from 100 to 248 GHz; GaAs diodes; *Nishizawa, Jun-ichi*; *T-MTT v26 n12 Dec 78* 1029-1035 (2A13)

Millimeter-wave radio propagation meteorological factors

attenuation measurements at 230 GHz through total atmosphere; *Wrixon, Gerard T.*; *T-MTT v26 n6 Jun 78* 434-439 (1D14)

Millimeter-wave radio receivers

cryogenic millimeter-wave receivers using molecular beam epitaxy diodes; 60-90 GHz band; *Linke, R. A.*; *T-MTT v26 n12 Dec 78* 935-938 (1A13)

Millimeter-wave switches

p-i-n diode modulator at 80.99 GHz, subnanosecond switching at 300 Mb/s; test set displaying transients in polar coordinates; *Bosch, Fridolin*; *T-MTT* v26 n1 Jan 78 24-27 (1B12)

Millimeter-wave waveguides; cf. Millimeter-wave integrated circuits**Millimeter-wave waveguides**

copper guide excess conduction loss; screening potential theory; *Wang, Yen-Chu*; *T-MTT* v26 n11 Nov 78 858-861 (1B02)

dielectric waveguides of circular cross section; attenuation characteristics in 72-GHz band; *Jablonski, Daniel*; *T-MTT* v26 n9 Sep 78 667-671 (1C13)

H-guide and groove-guide for 100–1000 GHz; *Harris, D. J.*; *T-MTT* v26 n12 Dec 78 998-1001 (1F06)

Millimeter-wave measurements

dielectric image lines; electric probe measurements in 26–90 GHz range; *Solbach, Klaus*; *T-MTT* v26 n10 Oct 78 755-758 (1D11)

Mixers; cf. Infrared mixers; Microwave mixers; Millimeter-wave mixers; Submillimeter-wave mixers**Mode locking; cf. Pulse generators****Modulation/demodulation; cf. Digital modulation; Microwave modulation; Millimeter-wave modulation; Optical modulation/demodulation****Moment methods**

dielectric obstacles inside rectangular waveguide, three-dimensional arbitrarily shaped obstacles; analysis using dyadic Green's function; *Wang, Johnson J. H.*; *T-MTT* v26 n7 Jul 78 457-462 (1A03)

electromagnetic scattering by dielectric bodies; convergence improvement using interpolants; *Hagmann, Mark J.*; *T-MTT* v26 n11 Nov 78 904-908 (1E06)

electromagnetic transmission through filled slit in conducting plane of finite thickness; TE case; *Auckland, David T.*; *T-MTT* v26 n7 Jul 78 499-505 (1D03)

Monopulse radar antennas

feed for long-imaging radar; high-power X-band feed, *Goudey, Kenneth R.*; *T-MTT* v26 n5 May 78 326-332 (1A08)

Multiconductor transmission lines; cf. Coupled transmission lines**Multiconductor transmission lines**

couplers; multistrip quadrature couplers and interdigitated couplers; *Tajima, Yusuke*; *T-MTT* v26 n10 Oct 78 795-801 (2A01)

microstrip, coupled suspended lines with tuning septums; generalized spectral domain analysis; *Itoh, Tatsuo*; *T-MTT* v26 n10 Oct 78 820-827 (2B12)

microstrip, multiple conductors on various interfaces; propagation characteristics calculation using spectral domain method; *Itoh, Tatsuo*; *T-MTT* v26 n12 Dec 78 983-987 (1E05)

with inhomogeneous dielectrics; characteristic admittance matrix; *Sun, Y. Y.*; *T-MTT* v26 n11 Nov 78 915-918 (1F02)

Multimode waveguides; cf. Optical fiber waveguides**Multiplexing; cf. Frequency-division multiplexing****Muscles**

electromagnetic radiation effects on isolated nerve and muscle preparations: 2450-MHz irradiation; *Chou, Chung-Kwang*; *T-MTT* v26 n3 Mar 78 141-147 (1A07)

N**Neon devices**

X-band radiation detection using neon indicator lamps; very high sensitivity detection; *Makover, Yaakov*; *T-MTT* v26 n1 Jan 78 38-43 (1C12)

Nerves

electromagnetic radiation effects on isolated nerve and muscle preparations: 2450-MHz irradiation; *Chou, Chung-Kwang*; *T-MTT* v26 n3 Mar 78 141-147 (1A07)

Network noise; cf. Oscillator noise**Network noise**

cryogenic millimeter-wave receivers using molecular beam epitaxy diodes: 60–90 GHz band; *Linke, R. A.*; *T-MTT* v26 n12 Dec 78 935-938 (1A13)

microwave linear devices; wave approach to characterizing noise properties, *Meys, R. P.*; *T-MTT* v26 n1 Jan 78 34-37 (1C08)

microwave two-port noise parameters determination using least-squares method; *Caruso, Giuseppe*; *T-MTT* v26 n9 Sep 78 639-642 (1A13)

millimeter-wave and microwave mixers, conversion loss and noise; predicting mixer performance, experimental results; *Held, Daniel N.*; *T-MTT* v26 n2 Feb 78 55-61 (1A09)

millimeter-wave and microwave mixers, conversion loss and noise; predicting mixer performance, theory, *Held, Daniel N.*; *T-MTT* v26 n2 Feb 78 49-55 (1A03)

Network sensitivity analysis; cf. Network tolerance analysis**Network sensitivity analysis**

cascade networks; *Bandler, J. W.*; *T-MTT* v26 n12 Dec 78 963-972 (1C13)

microstrip directional couplers; sensitivities of parameters of coupled-line coupler with respect to even- and odd-mode impedances, *Shamasundara, Srignipuram D.*; *T-MTT* v26 n10 Oct 78 788-794 (1G02)

Network tolerance analysis

cascade networks; *Bandler, J. W.*; *T-MTT* v26 n12 Dec 78 963-972 (1C13)

microstrip and slotline; sensitivity approach; *Garg, Ramesh*; *T-MTT* v26 n1 Jan 78 16-19 (1B04)

two-port with mismatched source and load and/or arbitrary reference planes, bounds on reflection coefficient amplitude; *Tromp, H.*; *T-MTT* v26 n12 Dec 78 973-978 (1D09)

Noise; cf. Network noise, Oscillator noise; Semiconductor device noise**Noise generators**

Schottky-barrier diodes in 75–115 GHz range; avalanche noise, *Keen, Nigel J.*; *T-MTT* v26 n10 Oct 78 843-844 (2D07)

Nonhomogeneous media; cf. Acoustic propagation, nonhomogeneous media; Electromagnetic propagation, nonhomogeneous media**Nonhomogeneous media**

electrostatic field problems involving nonhomogeneous anisotropic media; Green's function technique; *Kobayashi, Masanori*; *T-MTT* v26 n7 Jul 78 510-512 (1D14)

Nonlinear distortion; cf. Intermodulation distortion**Nonlinear networks; cf. Frequency conversion; Mixers****Nonlinear oscillators**

harmonically synchronized oscillators; noise and transfer properties; *Knochel, Reinhard*; *T-MTT* v26 n12 Dec 78 939-944 (1B03)

Nonlinearities

GaAs FETs; large-signal performance prediction; *Willing, Harry A.*; *T-MTT* v26 n12 Dec 78 1017-1023 (2A01)

Numerical methods; cf. Finite-element methods; Integral equations; Moment methods; Variational methods**Numerical methods**

acoustic surface-wave diffraction; simulating effect on device performance; *Penunuri, David*; *T-MTT* v26 n4 Apr 78 288-294 (1E10)

electromagnetic energy absorption in tissue prolate spheroids; calculation by point-matching method; *Ruppin, R.*; *T-MTT* v26 n2 Feb 78 87-90 (1C13)

microstrip parameter computation, single and coupled lines; high-speed procedure, *Jansen, R. H.*, *Correction*; *T-MTT* v26 n3 Mar 78 216 (1F12)

microstrip parameters computation, single and coupled lines; high-speed procedure; *Jansen, Rolf H.*; *T-MTT* v26 n2 Feb 78 75-82 (1C01)

O**Operator theory**

nonself-adjoint operators; variational formulation derived from standard quadratic functional for self-adjoint operators; *Jeng, Garbo*; *T-MTT* v26 n2 Feb 78 91-94 (1D03)

Optical diffraction

slab periodic medium bounded by different media on both sides; modal theory, *Chiu, Ruey-Shi*, *Correction*; *T-MTT* v26 n3 Mar 78 216 (1F12)

Optical fiber waveguides

dual-mode graded-index fiber; only LP₀₁ and LP₁₁ modes propagate and virtually same group velocities; *Sakai, Jun-ichi*; *T-MTT* v26 n9 Sep 78 658-665 (1C04)

Gaussian beams, multiple reflection in circular cross section; *Shin, Sang-Yung*; *T-MTT* v26 n11 Nov 78 845-851 (1A03)

inhomogeneous fibers; vectorial wave analysis using finite-element method; *Okamoto, Katsunari*; *T-MTT* v26 n2 Feb 78 109-114 (1E07)

inhomogeneous slab guides; propagation analysis using regularized WKBJ method; *Ikuno, Hiroyoshi*; *T-MTT* v26 n4 Apr 78 261-266 (1C11)

lossy cladding, effect on modal dispersion in parabolic-index fiber; *Masaki, Yoshifumi*; *T-MTT* v26 n11 Nov 78 852-855 (1A10)

modal power distribution at output and launching conditions; measurement method; *Shigesawa, Hiroshi*; *T-MTT* v26 n12 Dec 78 992-997 (1E14)

multimode fiber mode coupling; power flow equation analysis; *Tatekura, Kohichi*; *T-MTT* v26 n7 Jul 78 487-493 (1C05)

truncated parabolic-index fiber with minimum mode dispersion; *Geshiro, Masahiro*; *T-MTT* v26 n2 Feb 78 115-119 (1E13)

Optical measurements

fiber waveguide modal power distribution at output and launching conditions; *Shigesawa, Hiroshi*; *T-MTT* v26 n12 Dec 78 992-997 (1E14)

Optical modulation/demodulation; cf. Electrooptic modulation**Optical planar waveguides**

anisotropic metal-diffused waveguides; leaky surface waves; *Yamanouchi, Kazuhiko*; *T-MTT* v26 n4 Apr 78 298-305 (1F06)

inhomogeneous slab guides; propagation analysis using regularized WKBJ method; *Ikuno, Hiroyoshi*; *T-MTT* v26 n4 Apr 78 261-266 (1C11)

slab periodic medium bounded by different media on both sides; modal theory, *Chiu, Ruey-Shi*, *Correction*; *T-MTT* v26 n3 Mar 78 216 (1F12)

step discontinuity analysis using rigorous variational approach; *Rozzi, T. E.*; *T-MTT* v26 n10 Oct 78 738-746 (1C08)

Optical propagation, anisotropic media

electrooptic modulators, Green's function obtained using image coefficient method; capacitance calculation; *Kobayashi, Masanori*; *T-MTT* v26 n2 Feb 78 119-126 (1F03)

waveguides, metal-diffused; leaky surface waves; *Yamanouchi, Kazuhiko*; *T-MTT* v26 n4 Apr 78 298-305 (1F06)

Optical propagation, dispersive media; cf. Optical waveguides**Optical propagation, nonhomogeneous media; cf. Optical waveguides****Optical propagation, nonhomogeneous media**

slab of graded-index medium whose refractive index is polynomial expression of transverse coordinate; *Pratesi, Riccardo*; *T-MTT* v26 n11 Nov 78 856-858 (1A14)

Optical reflection

Gaussian beams, multiple reflection in circular cross section; *Shin, Sang-Yung*; *T-MTT* v26 n11 Nov 78 845-851 (1A03)

Optical resonators

unstable open resonators; edge diffraction calculation using ray optical technique; *Santana, Carlos*; *T-MTT* v26 n2 Feb 78 101-108 (1D13)

Optical surface waves

anisotropic metal-diffused waveguides; leaky surface waves; *Yamanouchi, Kazuhiko*; *T-MTT* v26 n4 Apr 78 298-305 (1F06)

Optical surface-wave waveguides; cf. Optical waveguides**Optical switches; cf. Electrooptic switches****Optical waveguides; cf. Optical fiber waveguides, Optical planar waveguides****Optical waveguides**

anisotropic metal-diffused waveguides; leaky surface waves; *Yamanouchi, Kazuhiko*; *T-MTT* v26 n4 Apr 78 298-305 (1F06)

Oscillators; cf. FM oscillators; Injection-locked oscillators; Microwave oscillators; Millimeter-wave oscillators; Phase-locked oscillators; Submillimeter-wave oscillators**Oscillator noise**

GaAs FET integrated oscillator with BaO-TiO₂ ceramic resonator; high-stability low-noise; *Abe, Hiroyuki*; *T-MTT* v26 n3 Mar 78 156-162 (1B08)

harmonically synchronized oscillators; *Knochel, Reinhard*; *T-MTT* v26 n12 Dec 78 939-944 (1B03)

IMPATT diode oscillator at 75 GHz; high-stability low-noise oscillator using injection locking and AFC with crystal oscillator as reference; *Okamoto, Hiroshi*; *T-MTT* v26 n2 Feb 78 136 (1G06)

IMPATT oscillator at 75 GHz; highly stable low-noise oscillator using parametric injection locking and AFC; *Okamoto, Hiroshi*; *T-MTT* v26 n8 Aug 78 627-628 (2B01)

Oscillator stability

harmonically synchronized oscillators; *Knochel, Reinhard*; *T-MTT* v26 n12 Dec 78 939-944 (1B03)

injection-locked pulsed oscillators with very fast switching characteristics; phase

and amplitude transients; *Pavlidis, Dimutrios*; *T-MTT* v26 n3 Mar 78 162-169 (1B14)
 millimeter-wave IMPATT oscillators; cavity stabilization and electronic tuning by parametric interaction; *Okamoto, Hiroshi*; *T-MTT* v26 n6 Jun 78 420-424 (1C14)
Oscillator stability, frequency
 GaAs FET integrated oscillator with BaO-TiO₂ ceramic resonator: high-stability low-noise; *Abe, Hiroyuki*; *T-MTT* v26 n3 Mar 78 156-162 (1B08)
 IMPATT diode oscillator at 75 GHz; high-stability low-noise oscillator using injection locking and AFC with crystal oscillator as reference; *Okamoto, Hiroshi*; *T-MTT* v26 n2 Feb 78 136 (1G06)
 IMPATT oscillator at 75 GHz; highly stable low-noise oscillator using parametric injection locking and AFC; *Okamoto, Hiroshi*; *T-MTT* v26 n8 Aug 78 627-628 (2B01)
 microwave oscillators stabilized by transmission cavity: matching; *Schunemann, Klaus*; *T-MTT* v26 n3 Mar 78 147-155 (1A13)

P

p-i-n diodes

cryogenically cooled C-band 8-diode switch matrix in stripline package for radio astronomy; *Behrens, George H. Jr.*; *T-MTT* v26 n9 Sep 78 629-635 (1A03)
 millimeter-wave modulator at 80.99 GHz, subnanosecond switching at 300 Mb/s: test set displaying transients in polar coordinates; *Bosch, Fridolin*; *T-MTT* v26 n1 Jan 78 24-27 (1B12)
 phase shifters, hybrid-coupled; transmission-line matching networks. *Stanski, J. Piotr*; *Correction*; *T-MTT* v26 n4 Apr 78 315 (2A02)
 submillimeter-wave phase shifters; multilayer dielectric waveguide driven by p-i-n diode. *Buckman, A. B.*; *Correction*; *T-MTT* v26 n2 Feb 78 127 (1F11)
Packaging; cf. Semiconductor device packaging
Parametric oscillators
 millimeter-wave IMPATT oscillators; cavity stabilization and electronic tuning by parametric interaction; *Okamoto, Hiroshi*; *T-MTT* v26 n6 Jun 78 420-424 (1C14)

Periodic media; cf. Nonhomogeneous media

Periodic structures

rectangular waveguide with sinusoidally varying width; propagation characteristics; *Mallick, Amiya Kumar*; *T-MTT* v26 n4 Apr 78 243-249 (1B07)
 surface waveguide consisting of equally spaced metallic rings; open-ring line; *Fray, Claude*; *T-MTT* v26 n11 Nov 78 886-892 (1D02)

Phase-locked oscillators; cf. Injection-locked oscillators

Phase-locked oscillators

linear FM ramp generator for long-range imaging radar: 1000-MHz bandwidth and 250- μ s duration; *Bromaghim, Dan R.*; *T-MTT* v26 n5 May 78 322-325 (1A04)

Phase measurement

dielectric image lines; electric probe measurements in 26-90 GHz range, *Solbach, Klaus*; *T-MTT* v26 n10 Oct 78 755-758 (1D11)

Phase modulation; cf. PM

Phase shifters; cf. Diode phase shifters; Ferrite phase shifters, Submillimeter-wave phase shifters

Phased arrays

microwave power transmission, antenna design and safety considerations, *Dickinson, Richard M.*; *T-MTT* v26 n5 May 78 335-340 (1B03)

Planar circuits; cf. Microwave integrated circuits, Millimeter-wave integrated circuits

Planar waveguides; cf. Optical planar waveguides

Plasma devices

multipactor receiver protectors for airborne applications; 50-kW peak power and 12.5 percent bandwidth in X-band; *Carlisle, Thomas P.*; *T-MTT* v26 n5 May 78 345-347 (1B13)

PM; cf. PSK

PM

abbr. of Phase modulation

Power amplifiers

GaAs Read-diode X-band amplifier in microstrip; 12-W output, *Tseing, Hua Quen*; *T-MTT* v26 n10 Oct 78 774-778 (1F02)

Power transmission; cf. Microwave power transmission

Probe antennas

in circular waveguide; input impedance seen by coaxial line driving thin cylindrical probe in TE₁₁-mode guide. *Deshpande, M. D.*; *Correction*; *T-MTT* v26 n4 Apr 78 315 (2A02)

in finite heterogeneous biological bodies; response of insulated probes; *Mousavinezhad, Seyed Hossein*; *T-MTT* v26 n8 Aug 78 599-607 (1G01)

Prolate spheroids; cf. Spheroids

Propagation; cf. Electromagnetic propagation; Optical propagation; Waveguides
PSK; cf. APK

PSK

abbr. of Phase-shift keying

PSK modulation/demodulation

injection-locked pulsed oscillators with very fast switching characteristics; phase and amplitude transients, *Pavlidis, Dimutrios*; *T-MTT* v26 n3 Mar 78 162-169 (1B14)

p-i-n diode modulator at 80.99 GHz, subnanosecond switching at 300 Mb/s, test set displaying transients in polar coordinates; *Bosch, Fridolin*; *T-MTT* v26 n1 Jan 78 24-27 (1B12)

Pulse-compression methods; cf. Chirp modulation

Pulse generators

linear FM ramp generator for long-range imaging radar: 1000-MHz bandwidth and 250- μ s duration; *Bromaghim, Dan R.*; *T-MTT* v26 n5 May 78 322-325 (1A04)

mode locking at X-band using IMPATT diode as gain element and Schottky-barrier diode as saturable absorber; *Glasser, Lance A.*; *T-MTT* v26 n2 Feb 78 62-69 (1B02)

optoelectronic switching in silicon for converting dc energy to RF pulses; *Proud, Joseph M.*; *T-MTT* v26 n3 Mar 78 137-140 (1A03)

Q

Q measurement

microwave resonators, method based on relation between integral of resonance curve and *Q* of cavity; *Kneppo, Ivan*; *T-MTT* v26 n2 Feb 78 131 (1G01)

R

Radar imaging

linear FM ramp generator for long-range imaging radar: 1000-MHz bandwidth and 250- μ s duration; *Bromaghim, Dan R.*; *T-MTT* v26 n5 May 78 322-325 (1A04)

monopulse tracking feed for long-range imaging radar, high-power X-band feed; *Goudev, Kenneth R.*; *T-MTT* v26 n5 May 78 326-332 (1A08)

Radar tracking antennas; cf. Monopulse radar antennas

Radiation detectors; cf. Infrared detectors; Microwave detectors;
 Submillimeter-wave detectors

Radiation effects; cf. Electromagnetic radiation effects

Radiation protection; cf. Semiconductor device radiation protection

Radiation therapy; cf. Electromagnetic radiation therapy; Gamma-ray therapy

Radio astronomy

p-i-n diode switch matrix consisting of 8 diodes in stripline package; cryogenically cooled C-band switch for radio astronomy; *Behrens, George H. Jr.*; *T-MTT* v26 n9 Sep 78 629-635 (1A03)

Radio communication; cf. Underground electromagnetic communication

Radio propagation meteorological factors; cf. Millimeter-wave radio propagation meteorological factors

Radiometry; cf. Microwave radiometry

Rain; cf. Meteorology

Ray optics; cf. Geometrical optics

Read diodes; cf. Avalanche diodes

Reflection; cf. Acoustic reflection; Electromagnetic reflection

Reflection amplifiers

mode locking at X-band using IMPATT diode as gain element and Schottky-barrier diode as saturable absorber; *Glasser, Lance A.*; *T-MTT* v26 n2 Feb 78 62-69 (1B02)

Reflection coefficient measurement; cf. Scattering parameters measurement

Reflector antennas

fed from circular TE₀₁-mode guide; pencil beam formation, *Wengenroth, Robert D.*; *T-MTT* v26 n5 May 78 332-334 (1A14)

MIC Doppler module with stripline dipole antenna and output radiation normal to substrate plane; *Nanbu, Shutaro*; *T-MTT* v26 n1 Jan 78 3-5 (1A05)

Reflector antennas, Cassegrain

monopulse tracking feed for long-range imaging radar: high-power X-band feed, *Goudev, Kenneth R.*; *T-MTT* v26 n5 May 78 326-332 (1A08)

Resonance; cf. Magnetic resonance

Resonators; cf. Cavity resonators; Dielectric resonators; Microstrip resonators; Transmission-line resonators; Tuners

Resonators

planar triangular resonators with magnetic walls; *Heliczajn, Joseph*; *T-MTT* v26 n2 Feb 78 95-100 (1D07)

unstable open resonators, edge diffraction calculation using ray optical technique; *Santana, Carlos*; *T-MTT* v26 n2 Feb 78 101-108 (1D13)

Resonator filters; cf. Cavity-resonator filters

Resonator filters

directional filters, TEM-mode transmission-type; exact and approximate synthesis; *Walker, John L. B.*; *T-MTT* v26 n3 Mar 78 186-192 (1D10)

Ridge waveguides

inhomogeneous dielectric-slab loading; dispersion characteristics; *Magerl, Gottfried*; *T-MTT* v26 n6 Jun 78 413-416 (1C07)

inhomogeneous dielectric-slab loading; dispersion characteristics, *Young, C. W. Jr.*; *T-MTT* v26 n11 Nov 78 919 (1F06)

Rough surfaces; cf. Corrugated surfaces

Rough surfaces

millimeter and submillimeter wavelength excess conduction loss in copper waveguides, screening potential theory, *Wang, Yen-Chur*; *T-MTT* v26 n11 Nov 78 858-861 (1B02)

S

Satellite antennas

microwave power transmission; antenna design and safety considerations; *Dickinson, Richard M.*; *T-MTT* v26 n5 May 78 335-340 (1B03)

Satellite applications, power station

transmitting antenna design and safety considerations; *Dickinson, Richard M.*; *T-MTT* v26 n5 May 78 335-340 (1B03)

Satellite communication, broadcast

FM receiver for 12-GHz band, low-noise low-cost receiver, *Konishi, Yoshihuo*; *T-MTT* v26 n10 Oct 78 720-725 (1B04)

Satellite communication, earth terminals

FM broadcast receiver for 12-GHz band; low-noise low-cost receiver; *Konishi, Yoshihuo*; *T-MTT* v26 n10 Oct 78 720-725 (1B04)

Satellite communication repeaters

radiation protection of microwave bipolar transistor linear amplifiers; *Gibson, Maurice H.*; *T-MTT* v26 n10 Oct 78 779-788 (1F07)

Scanning antennas

leaky-wave antennas integrated in quasi-planar dielectric waveguide; electronically scannable antenna; *Itoh, Tatsuo*; *T-MTT* v26 n12 Dec 78 987-991 (1E09)

Scanning arrays; cf. Frequency-scanned arrays

Scattering; cf. Electromagnetic scattering; Waveguide discontinuities

Scattering parameters

microstrip T-junctions, unsymmetric; computer program for scattering parameters computation; *Menzel, W.*; *T-MTT* v26 n3 Mar 78 217 (1F13)

two-port with mismatched source and load and/or arbitrary reference planes; bounds on reflection coefficient amplitude; *Tromp, H.*; *T-MTT* v26 n12 Dec 78 973-978 (1D09)

Scattering parameters measurement

bipolar transistors; large-signal *S*-parameters measurement using two-signal method; *Mazumder, Shamsur R*; *T-MTT v26 n6 Jun 78 417-420 (1C11)*
 de-embedding errors, bounds; *Glasser, Lance A*; *T-MTT v26 n5 May 78 379-380 (1E05)*
 six-port reflectometers; calibration using sliding terminations; *Engen, Glenn F*; *T-MTT v26 n12 Dec 78 951-957 (1C01)*

Schottky-barrier diodes

amplifiers; 12-W GaAs Read-diode *X*-band amplifier in microstrip; *Tserng, Hua Quen*; *T-MTT v26 n10 Oct 78 774-778 (1F02)*
 avalanche noise in 75-115 GHz range; *Keen, Nigel J*; *T-MTT v26 n10 Oct 78 843-844 (2D07)*
 MIC Doppler module comprised of Ge avalanche diode oscillator and Schottky-barrier detector diode; *Nanbu, Shutaro*; *T-MTT v26 n3 Mar 78 192-196 (1E02)*
 microwave modulator; SSB modulator pumped at submultiple of carrier frequency; *Chramec, Jerzy*; *T-MTT v26 n9 Sep 78 635-638 (1A09)*
 millimeter-wave and microwave mixers, conversion loss and noise; predicting mixer performance, experimental results; *Held, Daniel N*; *T-MTT v26 n2 Feb 78 55-61 (1A09)*
 millimeter-wave and microwave mixers, conversion loss and noise; predicting mixer performance, theory; *Held, Daniel N*; *T-MTT v26 n2 Feb 78 49-55 (1A03)*
 millimeter-wave frequency multipliers at 300 and 450 GHz using thin-film IC; *Takada, Tohru*; *T-MTT v26 n10 Oct 78 733-737 (1C03)*
 millimeter-wave mixer diodes prepared by molecular beam epitaxy for use in cryogenic receiver in 60-90 GHz band; *Linke, R A*; *T-MTT v26 n12 Dec 78 935-938 (1A13)*
 millimeter-wave mixer in stripline; subharmonically pumped two-diode mixer; *Carlson, Eric R*; *T-MTT v26 n10 Oct 78 706-715 (1A04)*
 millimeter-wave mixer, 76-106 GHz; broadband second-harmonic mixer uses single diode and wave absorber in IF circuit; *Kawasaki, Ryoji*; *T-MTT v16 n6 Jun 78 425-427 (1D05)*
 mode locking at *X*-band using IMPATT diode as gain element and Schottky-barrier diode as saturable absorber; *Glasser, Lance A*; *T-MTT v26 n2 Feb 78 62-69 (1B02)*
 submillimeter-wave and infrared cutoff frequencies, Si and GaAs diodes; *Champlin, Keith S*; *T-MTT v26 n1 Jan 78 31-34 (1C05)*

Schottky-barrier FETs; cf. Microwave FETs**Semiconductor device measurements**

bipolar transistor scattering parameters; large-signal *S*-parameters measurement using two-signal method; *Mazumder, Shamsur R*; *T-MTT v26 n6 Jun 78 417-420 (1C11)*
 microwave diodes; de-embedding errors, bounds; *Glasser, Lance A*; *T-MTT v26 n5 May 78 379-380 (1E05)*
 microwave transistor mounted in microstrip; parasitic reactances measurement using resonance method; *Beneking, H*; *T-MTT v26 n1 Jan 78 43 (1D03)*

Semiconductor device noise

microwave linear devices; wave approach to characterizing noise properties; *Meys, R P*; *T-MTT v26 n1 Jan 78 34-37 (1C08)*
 microwave two-port noise parameters determination using least-squares method; *Caruso, Giuseppe*; *T-MTT v26 n9 Sep 78 639-642 (1A13)*
 millimeter-wave and microwave mixers, conversion loss and noise; predicting mixer performance, experimental results; *Held, Daniel N*; *T-MTT v26 n2 Feb 78 55-61 (1A09)*
 millimeter-wave and microwave mixers, conversion loss and noise; predicting mixer performance, theory; *Held, Daniel N*; *T-MTT v26 n2 Feb 78 49-55 (1A03)*

Semiconductor device packaging

microwave transistor mounted in microstrip; parasitic reactances measurement using resonance method; *Beneking, H*; *T-MTT v26 n1 Jan 78 43 (1D03)*

Semiconductor device radiation protection

microwave bipolar transistor linear amplifiers for space applications; *Gibson, Maurice H*; *T-MTT v26 n10 Oct 78 779-788 (1F07)*

Semiconductor diodes; cf. Avalanche diodes, BARITT diodes; Gunn devices; IMPATT diodes; p-i-n diodes; Schottky-barrier diodes; Tunnel diodes**Semiconductor diode phase shifters; cf. Diode phase shifters****Semiconductor diode switches; cf. p-i-n diodes****Semiconductor diode switches**

RF pulse generation using optoelectronic switching in Si; *Proud, Joseph M*; *T-MTT v26 n3 Mar 78 137-140 (1A03)*

Semiconductor switches; cf. Semiconductor diode switches**Sensitivity analysis; cf. Network sensitivity analysis; Tolerance analysis****Silicon devices; cf. IMPATT diodes; Schottky-barrier devices****Silicon devices**

antennas; millimeter-wave frequency scanning array consisting of silicon rectangular rod with periodic metallic stripe perturbations on one side; *Klohn, Kenneth L*; *T-MTT v26 n10 Oct 78 764-773 (1E06)*
 RF pulse generation using optoelectronic switching in Si; *Proud, Joseph M*; *T-MTT v26 n3 Mar 78 137-140 (1A03)*

Skin

tumors; 27.12-MHz selective heating; *Anuch, Peter P*; *T-MTT v26 n8 Aug 78 569-572 (1D13)*

Skin effect

millimeter and submillimeter wavelength excess conduction loss in copper waveguides; screening potential theory; *Wang, Yen-Chu*; *T-MTT v26 n11 Nov 78 858-861 (1B02)*

Slab waveguides; cf. Optical planar waveguides**Slotline**

tolerance analysis using sensitivity approach; *Garg, Ramesh*; *T-MTT v26 n1 Jan 78 16-19 (1B04)*

Slotline directional couplers

strip-slot couplers; improving isolation of 3-dB couplers by lengthening slotline; *Schiek, Burkhard*; *T-MTT v26 n1 Jan 78 5-7 (1A07)*

Smith charts

reflection coefficient angle in wavelength fractions, measurement from horizontal line to right of origin; *Schoff, F W*; *T-MTT v26 n4 Apr 78 314 (2A01)*

Spark-gap switches

microwave power generation using $\lambda/4$ transmission-line resonator containing spark gap; *Ristic, Velimir M*; *T-MTT v26 n5 May 78 369-374 (1D09)*

Special issues

microwave and millimeter-wave integrated circuits; *T-MTT v26 n10 Oct 78 705-842 (1A03)*

Microwave Symposium, IEEE MTT-S International, Ottawa, Canada, 1978; selected papers from June 1978 symposium; *T-MTT v26 n12 Dec 78 925-1051 (1A03)*

microwaves, high-power; *T-MTT v26 n5 May 78 321-374 (1A03)*

microwaves in medicine; *T-MTT v26 n8 Aug 78 517-626 (1A03)*

Spheres

electromagnetic irradiation of cranial structure; inhomogeneous spherical model in near-field of 3-GHz loop or dipole antennas; heat potential distribution; *Hizal, Altunkan*; *T-MTT v26 n8 Aug 78 607-612 (1G09)*

electromagnetic scattering; Mie series solution; computer program; *Mautz, Joseph R*; *T-MTT v26 n5 May 78 375 (1E01)*

Spherical antennas

probes in finite heterogeneous biological bodies; response of insulated spherical probes; *Mousavimezhad, Seyed Hossein*; *T-MTT v26 n8 Aug 78 599-607 (1G01)*

Spheroids

electromagnetic energy absorption in tissue prolate spheroids; calculation by point-matching method; *Ruppin, R*; *T-MTT v26 n2 Feb 78 87-90 (1C13)*

Stability; cf. Oscillator stability**Strip transmission lines**

finline structures; analysis method; *Saad, Abdel Megid Kamal*; *T-MTT v26 n12 Dec 78 1002-1007 (1F10)*

rectangular lines with thin center conductor and air dielectric; characteristic impedance; *Weil, Claude M*; *T-MTT v26 n4 Apr 78 238-242 (1B02)*

Stripline

cylindrical and cylindrically warped lines; impedance calculation; *Wang, Yen-Chu*; *T-MTT v26 n1 Jan 78 20-23 (1B08)*

disk networks; impedance matrix of multipoint with fringing fields at disk edge; *Bonetti, René R*; *T-MTT v26 n7 Jul 78 471-477 (1B03)*

transmission-line properties; explicit formulas for practical applications; *Wheeler, Harold A*; *T-MTT v26 n11 Nov 78 866-876 (1B10)*

Stripline antennas

MIC Doppler module with stripline dipole antenna and output radiation normal to substrate plane; *Nanbu, Shutaro*; *T-MTT v26 n1 Jan 78 3-5 (1A05)*

Stripline circuits

millimeter-wave mixer; subharmonically pumped two-diode mixer; *Carlson, Eric R*; *T-MTT v26 n10 Oct 78 706-715 (1A04)*

Stripline circulators, ferrite

wideband *Y*-junction circulator for 18-26 GHz band; continuous tracking design approach; *Ayashi, Y*; *T-MTT v26 n4 Apr 78 314 (2A01)*

Y-junction circulators; frequency behavior; *Ayter, Sevgi*; *T-MTT v26 n3 Mar 78 197-202 (1E07)*

Stripline couplers

hybrids, symmetrical 4-ports; eigenadmittance condition for 90° hybrids to be obtainable by matching alone; *Riblet, Gordon P*; *T-MTT v26 n4 Apr 78 275-279 (1D11)*

meander-folded coupled lines; shortening of electric length due to folding; *Rehmark, Stig*; *T-MTT v26 n4 Apr 78 225-231 (1A03)*

Stripline directional couplers

very flat coupling characteristic; equivalent admittance of symmetrical 4-port couplers; *Riblet, Gordon P*; *T-MTT v26 n2 Feb 78 70-74 (1B10)*

very flat coupling characteristic; equivalent admittance of symmetrical 4-port couplers; *Riblet, Gordon P*; *Correction*; *T-MTT v26 n9 Sep 78 691 (1E09)*

Stripline filters

directional filters, TEM-mode transmission-type; exact and approximate synthesis; *Walker, John L B*; *T-MTT v26 n3 Mar 78 186-192 (1D10)*

Stripline switches

p-i-n diode switch matrix consisting of 8 diodes in stripline package; cryogenically cooled *C*-band switch for radio astronomy; *Behrens, George H*; *Jr*; *T-MTT v26 n9 Sep 78 629-635 (1A03)*

Submillimeter-wave (300-3000 GHz); cf. Infrared (0.70-100 μ m); Millimeter-wave (30-300 GHz)**Submillimeter-wave detectors**

Schottky-barrier diode cutoff frequencies; Si and GaAs diodes; *Champlin, Keith S*; *T-MTT v26 n1 Jan 78 31-34 (1C05)*

Submillimeter-wave mixers

Schottky-barrier diode cutoff frequencies; Si and GaAs diodes; *Champlin, Keith S*; *T-MTT v26 n1 Jan 78 31-34 (1C05)*

Submillimeter-wave oscillators

biological systems, coherent oscillations in 10¹⁰-10¹² Hz range; role in controlling tissue growth; *Frohlich, H*; *T-MTT v26 n8 Aug 78 613-617 (2A01)*

Submillimeter-wave phase shifters

multilayer dielectric waveguide driven by p-i-n diode; *Buckman, A B*; *Correction*; *T-MTT v26 n2 Feb 78 127 (1F11)*

Submillimeter-wave waveguides

copper guide excess conduction loss; screening potential theory; *Wang, Yen-Chu*; *T-MTT v26 n11 Nov 78 858-861 (1B02)*

H-guide and groove-guide for 100-1000 GHz; *Harris, D J*; *T-MTT v26 n12 Dec 78 998-1001 (1F06)*

Surface waves; cf. Acoustic surface waves; Electromagnetic surface waves; Optical surface waves**Sweep oscillators**

linear FM ramp generator for long-range imaging radar; 1000-MHz bandwidth and 250- μ s duration; *Bronaghim, Dan R*; *T-MTT v26 n5 May 78 322-325 (1A04)*

Switches; cf. Electrooptic switches; Light-triggered switches; Microwave switches; Millimeter-wave switches; Semiconductor diode switches; Spark-gap switches**T****Thermal factors**

ferrite isolators, thermal stress-induced breakdown; adhesive layer rupture initiates breakdown; *Buck, Daniel C*; *T-MTT v26 n5 May 78 357-360 (1C11)*

Thermography; cf. Infrared imaging**Thick-film circuits**

microwave circuits on alumina and fused silica substrates; thick- and thin-film technologies compared; *Ramy, Jean-Pierre*; *T-MTT v26 n10 Oct 78 814-820 (2B06)*

Thin-film circuits

microwave circuits on alumina and fused silica substrates; thick- and thin-film technologies compared; *Ramy, Jean-Pierre*; *T-MTT v26 n10 Oct 78 814-820 (2B06)*

millimeter-wave frequency multipliers at 300 and 450 GHz using thin-film IC; *Takada, Tohru*; *T-MTT v26 n10 Oct 78 733-737 (1C03)*

Titanium alloys/compounds, devices

GaAs FET integrated oscillator with BaO-TiO₂ ceramic resonator; high-stability low-noise; *Abe, Hiroyuki*; *T-MTT v26 n3 Mar 78 156-162 (1B08)*

Tolerance analysis; cf. Network tolerance analysis

Tolerance analysis

microstrip and slotline, sensitivity approach; *Garg, Ramesh*; *T-MTT v26 n1 Jan 78 16-19 (1B04)*

Toroids

resonators; exact solution of Helmholtz equation in toroidal coordinates; *Cap. Ferdinand*; *T-MTT v26 n7 Jul 78 478-486 (1B10)*

Transducers; cf. Acoustic transducers

Transferred-electron devices; cf. Gunn devices

Transforms; cf. Fourier transforms

Transistors; cf. Bipolar transistors; Microwave bipolar transistors; Microwave FETs

Transmission coefficient measurement; cf. Scattering parameters measurement

Transmission lines; cf. Coupled transmission lines; Distributed networks, Microstrip; Multiconductor transmission lines; Slotline; Strip transmission lines; Stripline

Transmission-line discontinuities; cf. Coaxial cable discontinuities; Microstrip discontinuities

Transmission-line discontinuities

dielectric image lines; electric probe measurements in 26-90 GHz range; *Solbach, Klaus*; *T-MTT v26 n10 Oct 78 755-758 (1D11)*

step discontinuities in TEM-mode lines; compensation using taper; *Malherbe, Johannes A. G.*; *T-MTT v26 n11 Nov 78 883-885 (1C13)*

Transmission-line filters; cf. Distributed filters

Transmission-line measurements

microstrip end and gap effects measurement using resonant technique. *Gupta, Chandra*; *T-MTT v26 n9 Sep 78 649-652 (1B09)*

Transmission-line networks; cf. Distributed networks

Transmission-line resonators

microwave power generation using $\lambda/4$ transmission-line resonator containing spark gap; *Ristic, Velimir M.*; *T-MTT v26 n5 May 78 369-374 (1D09)*

Traveling-wave devices

IMPATT diode distributed structure; *Franz, Michael*; *T-MTT v26 n11 Nov 78 861-865 (1B05)*

Tumors

coherent electrical vibrations in 10¹⁰-10¹² Hz range in biological systems, role of vibrations in controlling growth of tissues; *Frohlich, H.*; *T-MTT v26 n8 Aug 78 613-617 (2A01)*

cutaneous tumors; 27.12-MHz selective heating; *Antich, Peter P.*; *T-MTT v26 n8 Aug 78 569-572 (1D13)*

diathermy at 27.12 MHz; *Overgaard, Jens*; *T-MTT v26 n8 Aug 78 523-529 (1A09)*

electromagnetic radiation therapy; special issue; *T-MTT v26 n8 Aug 78 517-626 (1A03)*

electromagnetic radiation therapy; special issue foreword; *Guy, Arthur W., Guest ed.*; *T-MTT v26 n8 Aug 78 517-518 (1A03)*

microwave applicator system for small animals. *Baker, Robert J.*; *T-MTT v26 n8 Aug 78 541-545 (1B13)*

microwave direct-contact applicator for 2450 MHz; *Kantor, Gideon*; *T-MTT v26 n8 Aug 78 563-568 (1D07)*

microwave hyperthermia dose definition; *Atkinson, E. Ronald*; *T-MTT v26 n8 Aug 78 595-598 (1F11)*

microwave hyperthermia of mouse cancers; applicator and free-field techniques at 2450 MHz; *Robinson, J. Eugene*; *T-MTT v26 n8 Aug 78 546-549 (1C04)*

microwave hyperthermia, polyniboinosinic-polyribocytidylic, and mouse interferon inhibit tumor growth in mice; *Szmigielski, Stanislaw*; *T-MTT v26 n8 Aug 78 520-522 (1A06)*

microwave therapy at 2450-MHz used in conjunction with gamma-ray therapy on flour beetle; *Lai, Ping-Kwong*; *T-MTT v26 n8 Aug 78 530-534 (1B02)*

microwave therapy, hyperthermia, and L-ascorbic acid effect on Ehrlich ascites carcinoma cell metabolism; *Piontek, Gerald E.*; *T-MTT v26 n8 Aug 78 535-540 (1B07)*

millimeter-wave transmission through normal and tumor cells; standing waves; *Hersberger, W. D.*; *T-MTT v26 n8 Aug 78 618-619 (2A06)*

thermographic detection enhancement using microwave heating; *Thompson, J. E.*; *T-MTT v26 n8 Aug 78 573-580 (1E03)*

UHF (915 MHz) direct-contact applicator for deep-tissue heating in humans; clinical evaluation; *Lehmann, Justus F.*; *T-MTT v26 n8 Aug 78 556-563 (1C14)*

UHF (915 MHz) direct-contact applicator for heating deep tissues; *Guy, Arthur W.*; *T-MTT v26 n8 Aug 78 550-556 (1C08)*

Tunable filters

millimeter-wave filters integrated in quasi-planar dielectric waveguide; *Itoh, Taisuo*; *T-MTT v26 n12 Dec 78 987-991 (1E09)*

Tuners; cf. YIG tuners

Tunnel diodes

tunnel injection transit time diode operating from 100 to 248 GHz; GaAs diodes; *Nishizawa, Jun-ichi*; *T-MTT v26 n12 Dec 78 1029-1035 (2A13)*

Tunnels; cf. Underground electromagnetic communication

Two-port networks

mismatched source and load and/or arbitrary reference planes; bounds on reflection coefficient amplitude; *Tromp, H.*; *T-MTT v26 n12 Dec 78 973-978 (1D09)*

U

UHF generation

power generation using $\lambda/4$ transmission-line resonator containing spark gap; *Ristic, Velimir M.*; *T-MTT v26 n5 May 78 369-374 (1D09)*

UHF measurements; cf. Electromagnetic radiation effects

UHF radiation effects/safety; cf. Electromagnetic radiation

Underground electromagnetic communication

tunnels; attenuation constant of radio waves; *Chiba, Jiro*; *T-MTT v26 n6 Jun 78 439-443 (1E05)*

Underground electromagnetic propagation

tunnel containing braided coaxial cable; transmission modes in cable and coupling to tunnel environment; *Seidel, David B.*; *T-MTT v26 n7 Jul 78 494-499 (1C12)*

V

Vacuum switchgear

multipactor receiver protectors for airborne applications; 50-kW peak power and 12.5 percent bandwidth in X-band; *Carlisle, Thomas P.*; *T-MTT v26 n5 May 78 345-347 (1B13)*

Varactor circuits

frequency converters; intermodulation noise analysis using Volterra series; *Swerdlow, Richard B.*; *T-MTT v26 n4 Apr 78 305-313 (1F13)*

Variational methods

electromagnetic and/or acoustic field problems; systematic derivation of variational expressions, *Morishita, Katsumi*; *T-MTT v26 n9 Sep 78 684-689 (1E02)*

microstrip capacitance upper bound calculation using variational method and spectral domain approach, *Araki, Kiyomichi*; *T-MTT v26 n7 Jul 78 506-509 (1D10)*

microstrip ring resonators; reaction concept applied to resonant frequencies computation; *Pintzos, Sotirios G.*; *T-MTT v26 n10 Oct 78 809-813 (2B01)*

nonself-adjoint operators; variational formulation derived from standard quadratic functional for self-adjoint operators; *Jeng, Garbo*; *T-MTT v26 n2 Feb 78 91-94 (1D03)*

planar dielectric waveguide step discontinuity; *Rozzi, T. E.*; *T-MTT v26 n10 Oct 78 738-746 (1C08)*

Volterra series

frequency converter intermodulation noise analysis; *Swerdlow, Richard B.*; *T-MTT v26 n4 Apr 78 305-313 (1F13)*

W

Wave diffraction; cf. Diffraction

Wave propagation; cf. Propagation

Wave scattering; cf. Scattering

Waveform generators; cf. Oscillators; Pulse generators

Waveguides; cf. Circular waveguides; Coaxial waveguides; Dielectric-loaded waveguides; Dielectric waveguides; Electromagnetic surface-wave waveguides; Ferrite-loaded waveguides; Microstrip, Millimeter-wave waveguides; Optical waveguides; Ridge waveguides; Slotline; Stripline; Submillimeter-wave waveguides. Underground electromagnetic communication

Waveguides

arc characteristics at 28 GHz; *Nakamura, Makoto*; *T-MTT v26 n5 May 78 354-356 (1C08)*

dyadic Green's function for rectangular guides and cavities; derivation using theory of distributions. *Rahmat-Samii, Y., Correction*; *T-MTT v26 n1 Jan 78 44 (1D04)*

Waveguide antennas

Gaussian beam launcher for biological irradiation studies; circular waveguide illuminates dielectric sphere lens; *Neelakantaswamy, Perambur S.*; *T-MTT v26 n9 Sep 78 665-666 (1C11)*

rectangular guide feeding rectangular aperture in perfectly conducting plane of infinite extent; computer program for admittance, tangential field in aperture, and radiation patterns; *Mautz, J. R.*; *T-MTT v26 n1 Jan 78 44-45 (1D04)*

rectangular guide feeding rectangular aperture in perfectly conducting plane of infinite extent; computer programs; *Gardioli, Fred E.*; *T-MTT v26 n9 Sep 78 690 (1E08)*

Waveguide arrays

millimeter-wave frequency scanning array consisting of silicon dielectric rectangular rod with periodic metallic stripe perturbations on one side; *Klohn, Kenneth L.*; *T-MTT v26 n10 Oct 78 764-773 (1E06)*

Waveguide bends

magnetostatic surface-waves along curved ferrite surfaces; *Srivastava, Neeraj C.*; *T-MTT v26 n4 Apr 78 252-256 (1C02)*

microstrip bends and Y-junctions of arbitrary angles, scattering parameters calculation; *Mehran, Reza*; *T-MTT v26 n6 Jun 78 400-405 (1B08)*

microstrip; symmetric bends and their compensation; *Douville, Rene J. P.*; *T-MTT v26 n3 Mar 78 175-182 (1C13)*

Waveguide discontinuities; cf. Loaded waveguides; Transmission-line discontinuities, Waveguide bends; Waveguide junctions, Waveguide mounts

Waveguide discontinuities

couplers, transverse slot in common broadwall between two guides; equivalent circuit; *Pandharipande, V. M.*; *T-MTT v26 n3 Mar 78 209-212 (1F05)*

obstacles in irregularly shaped guide for which form function is imprecisely known, lower bound on phase shifts; *Kalikestein, Kalman*; *T-MTT v26 n4 Apr 78 250-252 (1B14)*

planar dielectric waveguide step discontinuity; rigorous variational approach; *Rozzi, T. E.*; *T-MTT v26 n10 Oct 78 738-746 (1C08)*

sinusoidally varying width, rectangular guide; propagation characteristics; *Mallick, Anuya Kumar*; *T-MTT v26 n4 Apr 78 243-249 (1B07)*

three-dimensional arbitrarily shaped dielectric obstacles inside rectangular guide; analysis using dyadic Green's function; *Wang, Johnson J. H.*; *T-MTT v26 n7 Jul 78 457-462 (1A03)*

Waveguide excitation

circular TE₁₁-mode guide; input impedance seen by coaxial line driving thin cylindrical probe. *Deshpande, M. D., Correction*; *T-MTT v26 n4 Apr 78 315 (2A02)*

circular waveguides; end launcher transition for exciting TE₁₁ mode from coaxial line; *Deshpande, M. D.*; *T-MTT v26 n9 Sep 78 672-675 (1D04)*

Waveguide filters; cf. Cavity-resonator filters

Waveguide filters

high-power S-band filter, reactive fourth-harmonic filter operating at 400-kW CW; *Mohr, Hans J.*; *T-MTT v26 n5 May 78 341-345 (1B09)*

millimeter-wave channel dropping filter using dielectric rectangular waveguide, *Iitanu, Takao*; *T-MTT v26 n10 Oct 78 759-764 (1E01)*

Waveguide junctions; cf. Hybrid junctions; Waveguide discontinuities

Waveguide junctions

coaxial line entering broad wall of rectangular guide; equivalent circuit; Eisenhart, Robert L.; *T-MTT* v26 n3 Mar 78 172-174 (1C10)
H-plane junction with triangular ferrite post; exact field theory treatment; Khilla, Abdel-Messias; *T-MTT* v26 n4 Apr 78 279-287 (1E01)

Waveguide mounts

post-mounting structures in rectangular guide; influence of general terminations at ports; Joshi, J. S.; *T-MTT* v26 n4 Apr 78 319-320 (2A06)

Waveguide obstacles; cf. Waveguide discontinuities

Waveguide switches

multipactor receiver protectors for airborne applications; 50-kW peak power and 12.5 percent bandwidth in *X*-band; Carlisle, Thomas P.; *T-MTT* v26 n5 May 78 345-347 (1B13)

Waveguide transitions

circular waveguide excitation from coaxial line; end launcher transition for exciting TE_{11} mode; Deshpande, M. D.; *T-MTT* v26 n9 Sep 78 672-675 (1D04)
 microstrip-cavity resonator coupling through aperture in substrate ground plane; Kumar, Mahesh; *T-MTT* v26 n9 Sep 78 690-691 (1E08)

Y

YIG

magnetostatic-wave propagation in YIG slab having periodically corrugated surface. Tsutsumi, Makoto, Correction; *T-MTT* v26 n5 May 78 374 (1D14)

YIG films

magnetostatic forward volume wave reflection characteristics of shallow grooved grating on YIG film; Parekh, Jayantkumar P.; *T-MTT* v26 n12 Dec 78 1039-1044 (2B09)

YIG tuners

resonator circuit with isolator property; application to magnetically tunable Gunn oscillator; Okada, Fumaki; *T-MTT* v26 n12 Dec 78 1035-1039 (2B05)