Abstracts

Microwave Integrated Circuits--An Historical Perspective

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Before attempting an historical view of microwave integrated circuits, it was necessary to consider just what a microwave integrated circuit is. If someone can come up with a clear, noncontroversial, universally accepted definition, he's a better man than I am. In the broadest sense, a microwave integrated circuit is any combination of circuit functions which are packaged together without a user accessible interface. This definition, however, opens the door to great kluges of waveguide bends and components which have been brazed or welded together, and that is clearly not the intent of this review. I have, therefore, limited the scope to planar integrated circuits which make use of process control manufacturing techniques for a significant portion of the integrated circuit, This would include such transmission-line techniques as stripline, rnicrostrip, slotline, finline, co-planar waveguide, and to a slightly lesser extent, lumped element circuits, image guide dielectric waveguides, and planar waveguide packages which are becoming a viable technique for integrated circuits at millimeter-wave frequencies.

❑ Return to main document.