

## High efficiency mode "E" amplifier powers high efficiency active transmitting patch antenna

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*F.J. Ortega Gonzalez, A. Asensio Lopez, V. Gonzalez Posadas, J.L. Jimenez Martin and C. Martin Pascual. "High efficiency mode "E" amplifier powers high efficiency active transmitting patch antenna." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 455-458.*

This paper describes a high efficiency amplifier that uses the load presented by a patch antenna to work in class "E". The resulting set is a high efficiency transmitting active antenna. The dimensions, shape and location of the feeding point in the antenna are selected to obtain an input impedance to force the transistor to work in class "E" at 885 MHz with very high collector efficiency:  $\eta_c = 90\%$  @  $V_{cc} = 12.5$ ,  $P_{out} = 1.5$  W.

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