Abstracts

A new thin film passive integration technology for miniaturisation of mobile phone front end modules: integration of a dual-band power amplifier, switch and diplexer for GSM

A. de Graauw, C. Copetti and W. Weekamp. "A new thin film passive integration technology for miniaturisation of mobile phone front end modules: integration of a dual-band power amplifier, switch and diplexer for GSM." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1925-1928.

The use of a new thin film substrate technology for integrating the critical passive parts of RF-circuits of mobile communication equipment is demonstrated. A very compact module that contains two power-amplifiers, two receive/transmit-switches and a diplex-filter for dual-band GSM mobile phone applications was designed, manufactured and tested in order to demonstrate the miniaturisation possibilities with this technology. With a size of 160 sq. mm, the module meets the GSM output power specifications (2 W at 900 MHz and 1 W at 1800 MHz) and the harmonic attenuation requirements. The realised insertion loss of less then 1.5 dB in the receive- and transmit chain together with a receive-transmit-isolation of over 20 dB is sufficient for most GSM applications.

❑ Return to main document.