Abstracts

A microwave radio for Doppler radar sensing of vital signs

A. Droitcour, V. Lubecke, Jenshan Lin and O. Boric-Lubecke. "A microwave radio for Doppler radar sensing of vital signs." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 175-178 vol.1.

A microwave radio for Doppler radar sensing of vital signs is described. This radio was developed using custom DCS1800/PCS1900 base station RFICs. It transmits a single tone signal, demodulates the reflected signal, and outputs a baseband signal. If the object that reflects the signal has periodic motion, the magnitude of the baseband output signal is directly proportional to the periodic displacement of the object. When the signal is reflected off a person's chest, this radio with appropriate baseband filters can detect heart and respiration rates from a distance as large as one meter from the target.

❑ Return to main document.