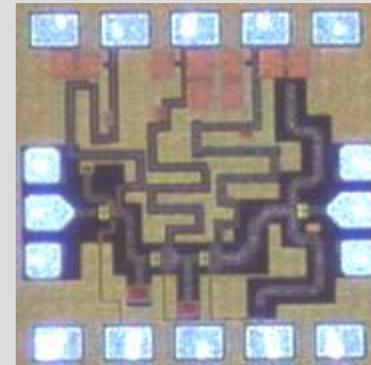
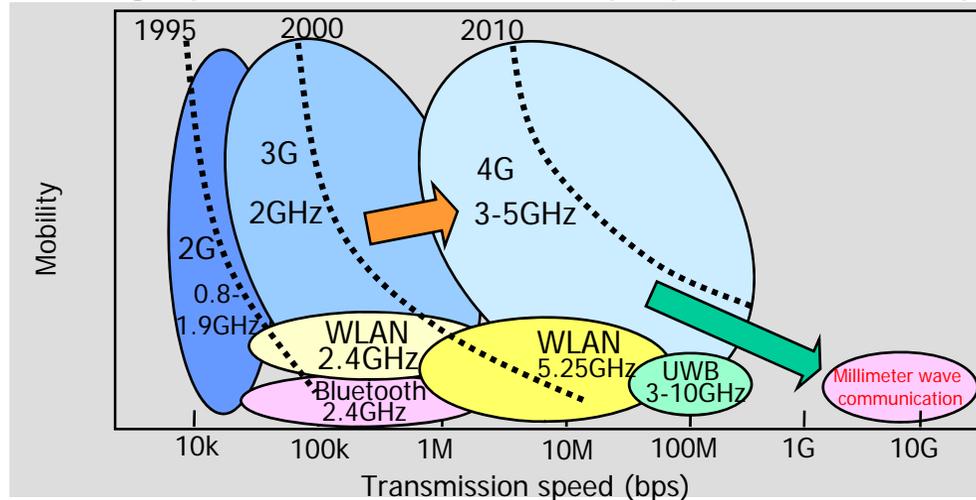


2009/6/9 Release

Power amplifier circuit technology made of silicon semiconductor to reduce transmitter costs for popularization of millimeter wave communication

High-power and wide band properties are compatible in 60GHz band and 80GHz band



Circuit prototype of power amplifier of 60GHz wide band (Chip size 0.8 × 0.8mm)

Hitachi, Ltd. has developed power amplifier circuit technology made of silicon semiconductor (a CMOS device) for millimeter wave transmitters. It reduces the cost of popularizing millimeter wave communication under the “Research & development for amplifier of radio wave resources” work contracted with the Ministry of Internal Affairs and Communications. The circuit technology, used for the 60- and 80-GHz millimeter band frequencies, achieves practical output signals over the wide band of 7~9GHz. Millimeter wave communication can achieve high definition video communication without signal processing operations such as data compression and expansion, so it could be used in new areas such as home networks and train radio, in addition to a new inter-vehicular system of automotive radar. This circuit technology is expected to help popularize millimeter wave communication for use in new areas by increasing the communication distance performance of millimeter communication and reducing costs.