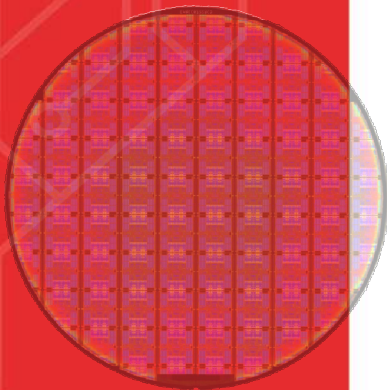




Taiwan Microelectronics Inc.



www.taiwanmicro.com.tw

TM1002

WCSP- 1.1x0.75X0.37 mm-6L

2.3~2.7GHz Low Noise Amplifier with a bypass RF Switch

The TM1002 is a Low Noise Amplifier (LNA) MMIC with a bypass switch for 2.3~2.7 GHz receiver applications, available in a WLCSP. This product is only used in an over molded module. The TM1002 delivers system-optimized gain for both primary and diversity applications where sensitivity improvement is required. The high linearity of this low noise device ensures the required receive sensitivity independent of transmit power level in FDD systems. To lower power consumption it provides sufficient receive signal strength. The TM1002 LNA part can be switched off to operate in bypass mode at a 1 μ A current. The TM1002 requires only one external matching inductor. The TM1002 is optimized for 2300 MHz to 2700 MHz.

Features

- Operating frequency from 2300 MHz to 2690 MHz
- Noise figure = 0.95 dB
- Gain 13 dB with matching circuit
- Bypass switch insertion loss of -2.2 dB
- Supply voltage 1.5 V to 3.1 V
- Optimized performance at a supply current of 5.8 mA
- Bypass mode current consumption < 1 mA
- ESD protection on all pins (HBM > 2 kV)
- Meet Moisture sensitivity level 1

Applications

- LNA for LTE reception in smart phones
- LNA good for 2.4GHz applications
- 2.4GHz RF front-end modules
- Feature phones
- Tablet PCs

Functional Block Diagram

