General Description

The PMB 2205 is a direct quadrature modulator for use in mobile communication equipment.

An external LO signal f_0 is fed to the modulator input. This signal is first doubled and then bandpass filtered at $2f_0$. The filter may be realized by an external tank circuit. Alternatively, a local oscillator operating at $2f_0$ may be connected to the divider input. This signal is the clock for a 2:1 divider. At the output of the divider orthogonal carriers are provided which are mixed with the baseband modulation signals by two multipliers. The outputs of the multipliers are added and amplified by a linear output stage.

The EN pin allows the modulator to be switched in power-down mode.

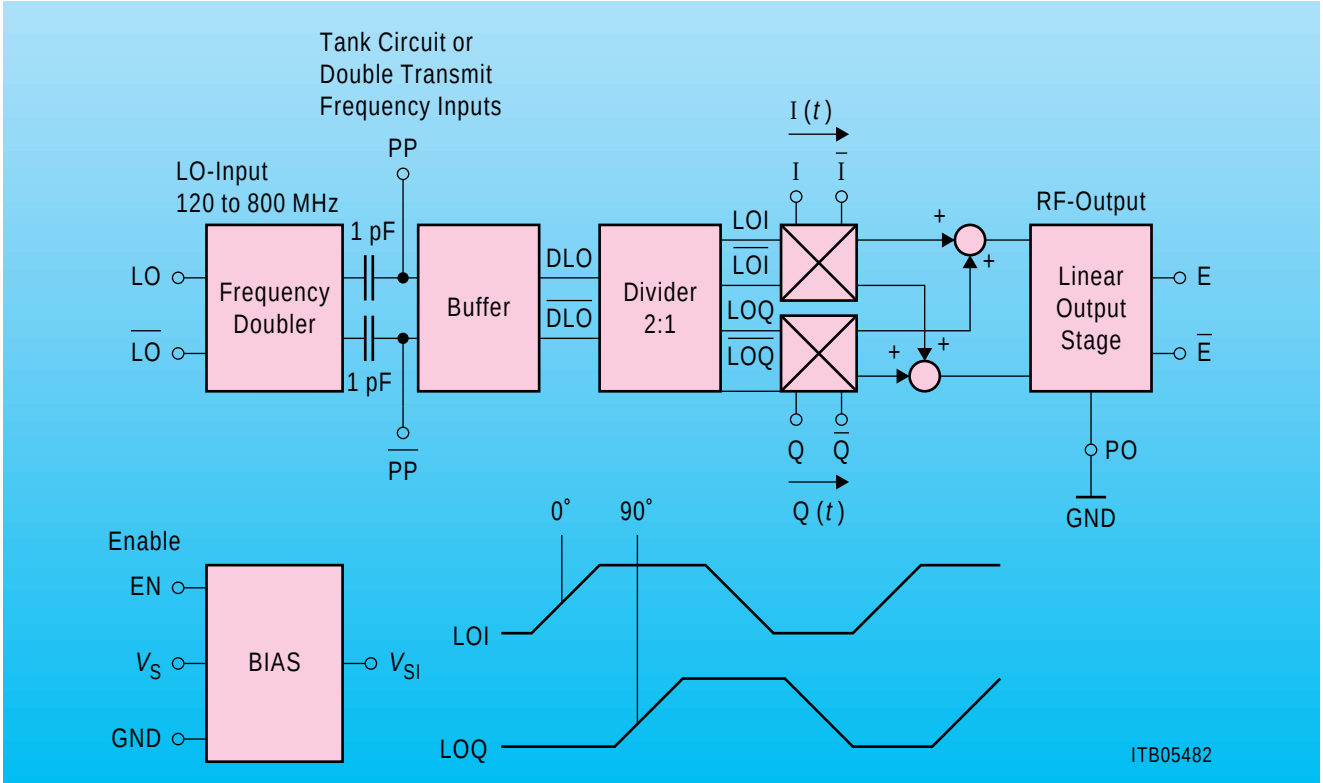
Applications

- Vector modulated cellular and cordless systems: GSM, PCN, PCS, PDC, DAMPS, CDMA, WLAN, etc.
- Various modulation schemes, such as PM, PSK, FSK, QAM, QPSK, GMSK etc.
- Analog systems with FM- and AM modulation
- Space and power saving optimizations of existing discrete transmitter circuits

Type	Package
PMB 2205-T	P-DSO-20-1 (SMD)
PMB 2205-S	P-SSOP-20-1 (Shrink SMD)

Features

- Direct modulation vector modulator
- Linear modulating inputs
- Symmetrical circuitry
- Wide LO-frequency range 120 MHz to 800 MHz
- LO operation alternatively at transmit frequency or double transmit frequency
- Generation of orthogonal carriers within a wide frequency range
- 35-dB carrier rejection, 42-dB SSB rejection
- 42-dB rejection of third order products
- 0-dBm linear output power
- Modulation frequency range 0 to 400 MHz
- Power-down mode
- P-DSO-20 or P-SSOP-20 package
- Temperature range – 25 °C to 85 °C



Block Diagram