

Applications

- GSM/GPRS/WCDMA/LTE Handsets and Modems
- GPRS Class 12 Compatible

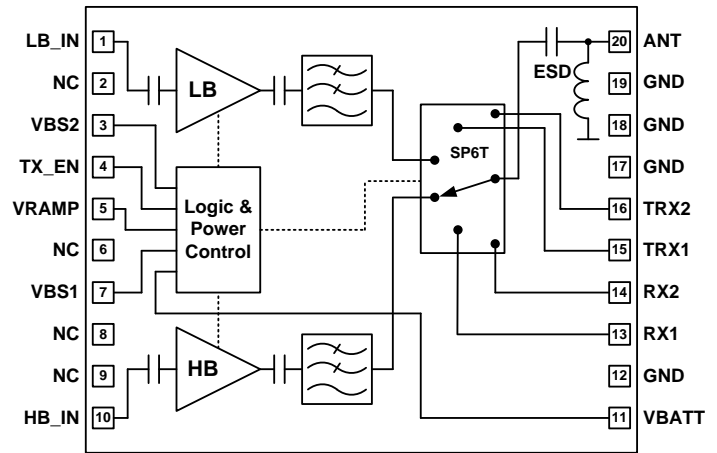
Product Features

- Ultra Compact Size – 5.0x6.0x1.0mm.
- High System Efficiency – GSM850/900 46 to 47% , DCS/PCS 44 to 43%
- Integrated Power and SP6T Control
- Integrated SP6T pHEMT Switch with two WCDMA/LTE Tx/Rx Ports
- Free choice of Rx ports for band selection
- Integrated Low Pass Tx Harmonics Filter
- Positive Supply Voltage 3.0 to 4.5 V.
- 50 Ω Input and Output Impedances.
- CMOS Compatible Module Control Inputs.
- High-Reliability InGaP HBT Technology
- Ruggedness 20:1
- 260°C RoHS compliant

General Description

The advanced dual-band (Broadband Tx) **Transmit Module** designed for WCDMA/GSM mobile handset applications provides full RF transmit functionality in a size of only 30 mm². The GSM850/900 and DCS/PCS power amplifier blocks including power control are combined with a low insertion loss pHEMT switch, Tx harmonics filtering, integrated switch decoder, two Rx ports, two TRx ports, and ESD protection. This architecture eliminates the need for any PA-to-switch design effort for phone designers. Up to two bands of WCDMA or LTE operation is supported by TRx ports and both Rx and TRx ports are frequency independent, allowing flexible routing to the transceiver. Fabricated in high-reliability InGaP HBT/ pHEMT technology, the module supports GPRS class 12 operation and provides 50 Ohms input and output impedances at all RF input and output ports. The module control inputs are CMOS compatible and have **no need for an external reference voltage**. With excellent efficiency performance in each band, the power amplifier and switch module contributes to overall talk-time targets in next generation mobile handset designs.

Functional Block Diagram



Pin Out & Assignments

| Pin# | Pin Name | Function |
|------|-------------------|--------------------------|
| 1 | LB_IN | GSM 850/900 RF Input |
| 2 | NC | Not Connected |
| 3 | V _{BS2} | Digital Control Signal |
| 4 | TX_EN | Digital Control Signal |
| 5 | V _{RAMP} | DAC Control Signal |
| 6 | NC | Not Connected |
| 7 | V _{BS1} | Digital Control Signal |
| 8 | NC | Not Connected |
| 9 | NC | Not Connected |
| 10 | HB_IN | DCS1800/PCS1900 RF Input |
| 11 | V _{BATT} | Battery Supply Voltage |
| 12 | GND | Ground |
| 13 | RX1 | RX1 Output |
| 14 | RX2 | RX2 Output |
| 15 | TRX1 | TRX1 Output |
| 16 | TRX2 | TRX2 Output |
| 17 | GND | Ground |
| 18 | GND | Ground |
| 19 | GND | Ground |
| 20 | ANT | Antenna port |
| 21 | GND | Ground |