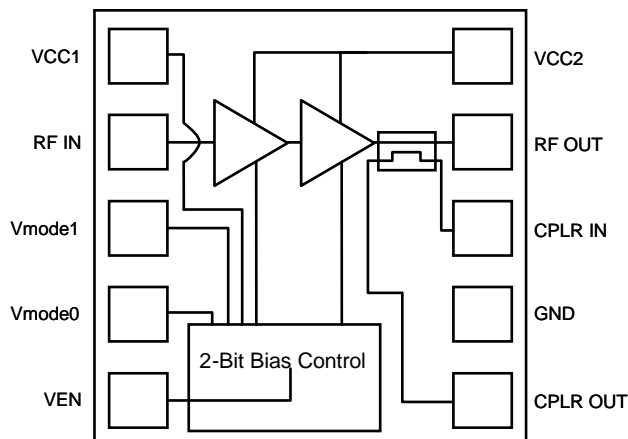


Multi-Mode (WCDMA B4, CDMA BC15, HSPA+, LTE) 3x3 PA Module

Functional Block Diagram



Product Description

The TQM756014 is fully matched Power Amplifier Module designed for use in CDMA BC15 (AWS), WCDMA (Bands 4) and LTE handsets. Its compact 3x3mm package including a coupler and built-in voltage regulator makes it ideal for today's extremely small data enabled phones. Its RF performance meets the stringent linearity requirements for multi-mode operation.

The TQM756014 is designed on TriQuint's GaAs BiHEMT technology with CuFlip® assembly offering state of the art reliability, temperature stability and ruggedness. The 3-Gain state PA die operates in LPM, MPM and HPM to maximize talk time over the entire range of operating conditions. To simplify the cost/time of calibration while in production the TQM776011 can be used in 1-bit operation; either LPM/HPM with only 4mA of IcQ up to +13dBm in LPM, or MPM/HPM with 9mA of IcQ up to +17dBm in MPM.

Electrical Specifications

Parameter	Typ	Units
Frequency	1733	MHz
WCDMA mode maximum Pout ¹	28.3	dBm
LPM Quiescent Current	4	mA
ACLR5	-40	dBc
ACLR10	-54	dBc
Power Supply Current @ 28.3dBm	490	mA
Rx Band Noise	-142	dBm/Hz

Note 1: Test Conditions WCDMA Rel99 Test Mode: V_{CC}=3.4VDC, V_{EN}=HIGH, T_C=25°C

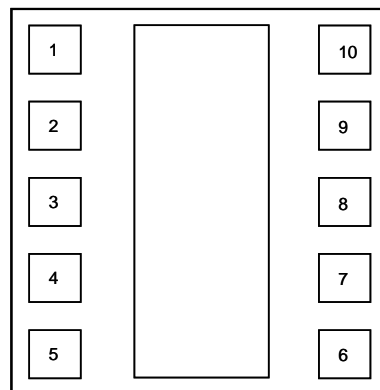
Features

- GaAs BiHEMT / CuFlip® PA Technology
- Typical Quiescent Current values:
LPM: 4 mA
MPM: 9 mA
HPM: 90 mA
- Excellent Linearity in all modes
- Integrated high performance coupler
- Excellent Phase Discontinuity
- Built-in voltage regulator functionality eliminating any external switch circuitry
- Small 10-pin, 3x3mm module
- Lead-free 260°C / RoHS / Halogen-free
- Full ESD protection

Applications

- WCDMA B4 Handsets
- CDMA2000 BC15 (AWS) Applications
- HSUPA, HSDPA, HSPA+ Applications
- LTE-Compatible Applications

Package Style



10-Pin Laminate Module
Top View (through package)