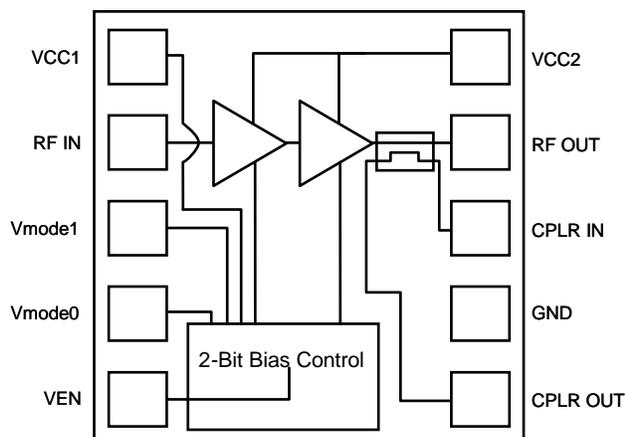


**Multi-Mode (WCDMA B4, CDMA BC15, HSPA+, LTE) 3x3 PA Module**

**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 I<sub>cQ</sub> up to +13dBm in LPM, or MPM/HPM with 9mA of I<sub>cQ</sub> up to +17dBm in MPM.

**Electrical Specifications**

Parameter	Typ	Units
Frequency	1733	MHz
WCDMA mode maximum Pout <sup>1</sup>	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<sub>CC</sub>=3.4VDC, V<sub>EN</sub>=HIGH, T<sub>C</sub>=25°C

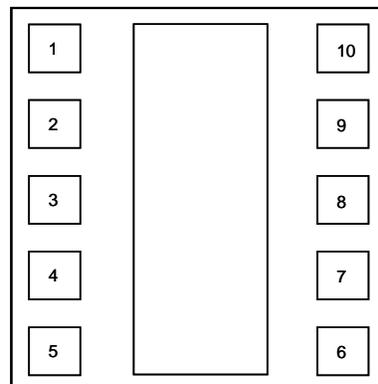
**Features**

- 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)**



**Data Sheet:**

For additional information and latest specifications, see our website: [www.triquint.com](http://www.triquint.com)  
Revision J, August 08, 2012