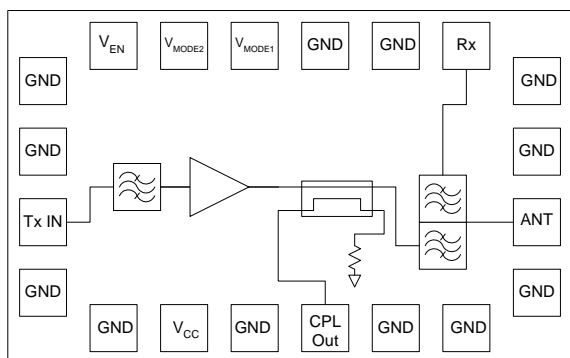


Tritium II PA-Duplexer Module™ CDMA AWS Band

Functional Block Diagram



Product Description

The TQM653029 is a fully matched CDMA AWS band PA-Duplexer module for use in mobile phones and part of TriQuint's Tritium® II product family. The module is designed with a focus on size, current consumption and phone layout simplicity. Within a compact area of only 28mm², the module integrates a single-ended transmit filter, duplexer, high efficiency PA die, RF power coupler, matching and built in voltage regulator functionality eliminating the need for external switch circuitry. With an RF power output up to 26dBm the TQM653029 meets the strict ACPR/ALTR requirements of multi-band, feature-rich CDMA2000 handset designs.

The module will provide the lowest overall current consumption available in the market based on the current sub-urban CDG (CDMA Development Group) curve by providing a 3 Gain state amplifier. In Low-Power mode operation a quiescent current of only 6mA will allow the module to achieve an overall average current of less than 50mA. The pin layout is optimized for use with new CDMA discrete and packaged transceiver solutions although its operation is backwards compatible with existing chipsets.

Electrical Specifications

Test Conditions V_{CC}=3.4V, V_{EN}=High, T=25°C

Parameter	Typ	Units
Frequency	1733	MHz
Max P _{OUT}	26	dBm
ACPR (±885kHz offset)	-50	dBc
ALTR (±1.98MHz offset)	-60	dBc
Current Consumption (at +25.5dBm Pout)	400	mA
Quiescent Current in LPM	6	mA
Leakage at Rx Port	-31	dBm
Rx Noise	-182	dBm/Hz

Features

- Compact 7.0x4.0x1.1mm module replacing more than 12 discrete components
- Integrated duplexer, single-ended Tx filter, PA die, RF power coupler and matching
- Built-in voltage regulator functionality eliminating any external switch circuitry
- High efficiency three gain state PA for lowest overall current consumption
- Typical quiescent current values:
 Low Power Mode (LPM) = 6mA
 Medium Power Mode (MPM) = 20mA
 High Power Mode (HPM) = 90mA
- Low Current Consumption
 Typical: 400 mA @ +25.5dBm
 Typical: 360 mA @ +24.5dBm
 Typical: 45 mA @ +13dBm
- Excellent ACPR
 Typical: -50 dBc @ +/- 1.25MHz offset
- Excellent ALTR
 Typical: -60 dBc @ +/- 1.98 MHz offset
- Lead-free 260°C RoHS Compliant
- Halogen-free (HF) Compliant

Applications

- IS-95/98/CDMA2000
- EVDO Rev A Compliant
- Tri-band CDMA Handsets

Package Style

