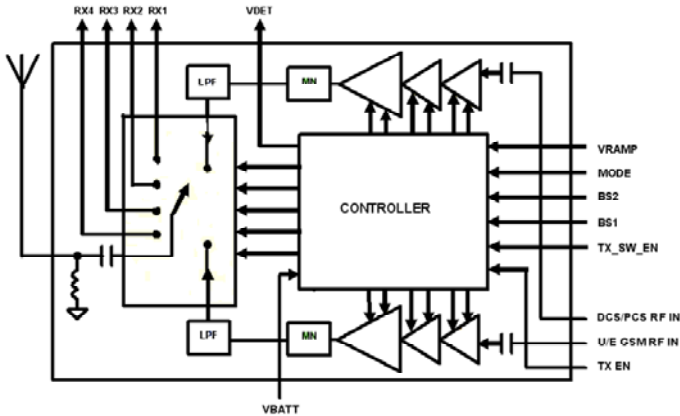


**TRP Enabled Quad-Band GSM/EDGE Transmit Module**

**Functional Block Diagram**



**Product Description**

The advanced quad-band multimode GSM/EDGE Transmit Module designed for mobile handset applications provides full RF transmit functionality in a size of only 48 mm<sup>2</sup>. This module has been optimized for high GSM/GPRS and EDGE efficiency. To simplify system design, this transmit module also integrates a power control function. The power signal is provided by Vramp from a ramp control DAC in the baseband. In GSM mode, Vramp controls the GaAs PA output power in GSM mode by controlling the desired detected power loop setpoint of an internal closed power control loop of the GaAs PA. The module incorporates a peak power detector circuit which is common to both LB and HB. In GSM mode the output power will be regulated by the Vdet signal from the detector, ensuring constant forward power over mismatch. In EDGE mode the PA bias will be set using the Vramp control.

All four Rx ports are frequency independent and allow flexible routing to the transceiver. The module supports GPRS class 12 operation and provides 50 Ohms input and output impedances at all RF input and output ports.

High reliability, temperature stability, and ruggedness are assured by utilizing TriQuint's 3rd generation InGap HBT technology and by utilizing TriQuint's CuFlip™ bumping process to keep the die cool under all operating conditions.

**Electrical Specifications**

Parameter	850 Band	900 Band	DCS Band	PCS Band	Units
	Typ	Typ	Typ	Typ	
GSM Pout	35	35	33	33	dBm
Efficiency	48	48	41	41	%
Pin	3	3	3	3	dBm
EDGE Pout	27.2	27.2	26.3	26.3	dBm
Efficiency	17	17	19.5	19.5	%
Gain	32	32	34	34	dB
ACPR (400KHz)	62	62	62	62	dBc

**Features**

- All In One Transmit Module
- High System Efficiency – GSM900/GSM850 48% , DCS/PCS 41% Integrated Power and SP6T control
- Integrated Coupler Detector - Full TRP compliance: <math>\pm 0.5\text{dB}</math> power variation into 3:1
- Integrated Low Pass Tx Harmonics Filter
- GSM/EDGE Multi-mode capability
- Optimized for operation with Broadcom, IFX and STE
- High GSM/GPRS/EDGE Efficiency
- GPRS class 12 compatible
- Size: 6x8x1 mm<sup>3</sup>

**Applications**

- GSM/GPRS/EDGE Handsets and Modems
- Dual-, Tri-, Quad-band Class 12 Compatible

**Package Style**

