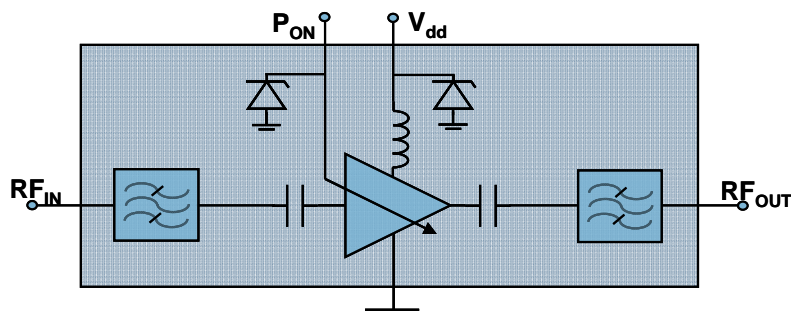


**GPS LNA-Filter Receive Module**

**Functional Block Diagram**



**Product Description**

TQM640002 RF front end module (FEM) is an active device for GPS applications (center frequency 1575.42 MHz). It is designed for simultaneous GPS + voice in multi-function handsets. The FEM is comprised of a low-power flip-chip LNA die, a pair of high-performance SAW filters, and integrated passive matching circuitry. The module will operate at 1.8v or 2.8v bias and its current consumption – typically 5.0 mA – is not changed by DC supply, making it suitable for use in low-power applications & during low-battery situations. The FEM performance exhibits high in-band gain and excellent rejection in all the key cellular & WLAN/Bluetooth bands. The device also exhibits both a high intercept point & a low noise figure, which optimally addresses today's most stringent GPS front end receiver requirements.

**Electrical Specifications**

Typical performance, 1.8v bias

Parameter	Typ	Units	Comments / Conditions
Gain	16	dB	Under standard conditions
Noise Figure	1.56	dB	50 Ω system
Out of band Input P1dB	>23	dBm	GSM800 / GSM900
	>16	dBm	PCS / DCS / WCDMA
Rejection			
5 --- 980MHz	78	dBc	All Rejection measurements are referenced to 1575 MHz peak Gain and network analyzer power set to -30 dBm.
1620 --- 1720 MHz	74	dBc	
1720 --- 1785 MHz	70	dBc	
1850 --- 1980 MHz	70	dBc	
2400 --- 2500 MHz	68	dBc	

**Preliminary Data Sheet: Subject to change without notice**

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



**Features**

- Low noise figure & high associated gain for high IP3 receiver stages for 1575 MHz
- NF = 1.56 dB; Gain=16 dB @ 1.8V
- No external matching components required
- Low current consumption & low voltage operation
- High immunity against inband compression due to out-of-band interferers during simultaneous GPS + voice operation
- Input and output internally pre-matched to 50 Ω
- Low cost miniature package 3 x 3 x 1.0 mm – suitable for low profile handset applications
- Power-up control for the LNA
- Designed to operate at 1.8V, with enhanced linearity performance at 2.8V
- Halogen-free

**Applications**

- 1575.42 MHz, L1 band GPS applications
- Personal Navigation Devices
- Cellular Handsets: Simultaneous GPS + voice calls

**Package Style**

