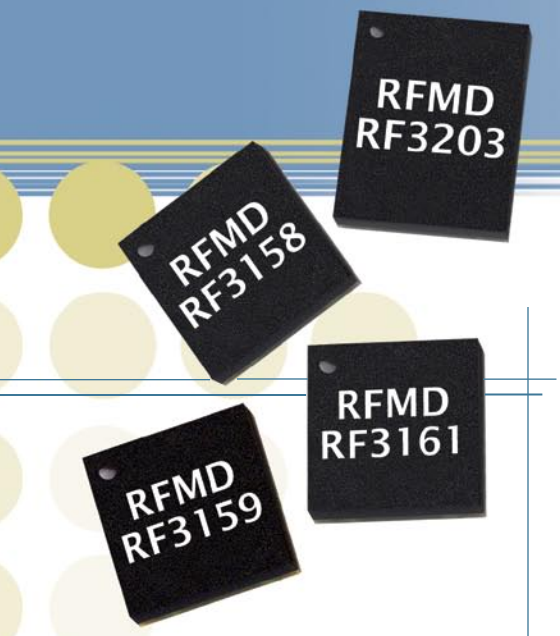


RFMD® is a global leader in wireless communications technology. We've built our world-class reputation in the industry by consistently anticipating and providing **what's next in RF** solutions.

What's Next in EDGE Front-Ends

EDGE—Enhanced Data Rates for Global Evolution

This 2.5G technology is part of the evolution of the GSM standard and enables data transmission rates in excess of 100 Kbps. Designers and manufacturers of EDGE-enabled handsets face the ongoing challenges of improving time to market (TTM) and lowering the cost of implementation (COI), while providing the benefits of feature rich devices. As with most emerging standards, the relatively small number of manufacturers as compared to the previous generation is indicative of the complexity of the devices.

While optimizing for stringent, 8-PSK requirements, the EDGE market demands that GMSK efficiency remains on par with that seen in GPRS handsets. Additionally, 8PSK efficiency is quickly becoming a priority parameter as we see applications that require higher data rates becoming more prevalent and more test and calibration steps are being added through development and production. Last but not least, the lack of EDGE market maturity has also led to a variety of transmit architectural approaches (linear and large signal polar modulation).

These demands are brought about by the need to support both EDGE only and 3G multi-mode handsets. Even when the transmit architecture is the same, the RF front-end requirements are different, as well as output power and transmit switch performance, to name two prominent parameters. Furthermore, top original equipment manufacturers (OEMs) and network operators are raising the performance bar by placing demands of total radiated power (TRP) and specific absorption rate (SAR) compliance simultaneously with demands for maintaining or improving talk time.

This evolving market is constantly bringing forward new, complex challenges in the EDGE front-end space. These are the challenges that require leading-edge technologies and techniques in order to deliver the types of quality front-end solutions our customers have come to expect from RFMD.

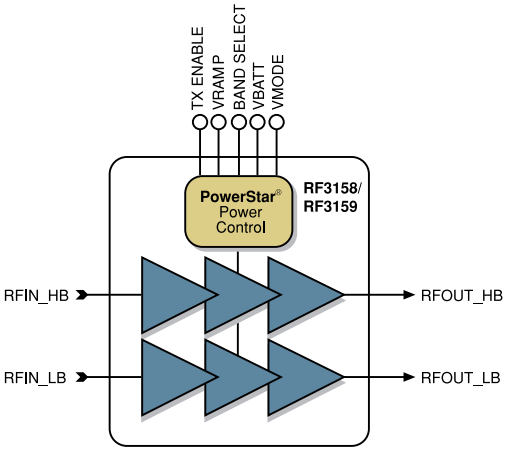
The requirements and priorities of OEMs and original design manufacturers (ODMs) in this demanding market vary depending on experience, resources and their chosen vectors of differentiation. RFMD focuses on addressing the variety of customer and carrier priorities by offering a segmented portfolio of GSM/GPRS front-end products.

RF3158 / RF3159	**Quad Band for Platform Flexibility**
RF3161	**Quad Band for Platform Flexibility, Size Reduction**
RF3203	**Quad Band for Platform Flexibility, Highly Integrated, TRP, Reduced Current Consumption**

RF3158 / RF3159

- GSM850 / GSM900 / DCS1800 / PCS1900
- Linear EDGE PA modules
- Size: 6x6x1. mm
- GMSK Efficiency: GSM850 / GSM900 – 51% at PMAX, DCS1800 / PCS1900 – 49% at PMAX
- EDGE low power mode
- Proven **PowerStar**® technology for high-volume manufacturing

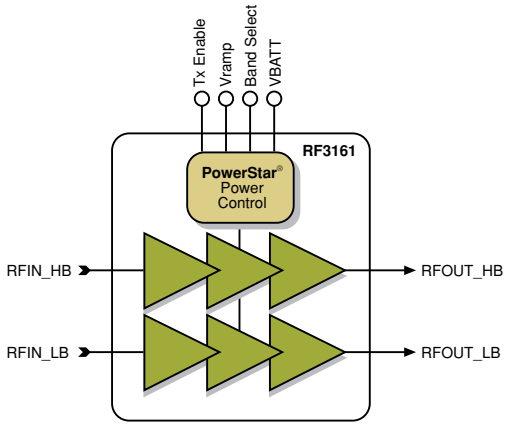
RF3158 / RF3159 Block Diagram



RF3161

- GSM850 / GSM900 / DCS1800 / PCS1900
- Large signal polar EDGE PA module
- Size: 6x6x1.0mm
- High Efficiency: GSM850 / GSM900 – 55% at PMAX, DCS1800 / PCS1900 – 52% at PMAX
- Integrated voltage reference
- No external routing needed
- Proven **PowerStar** Technology for high-volume manufacturing

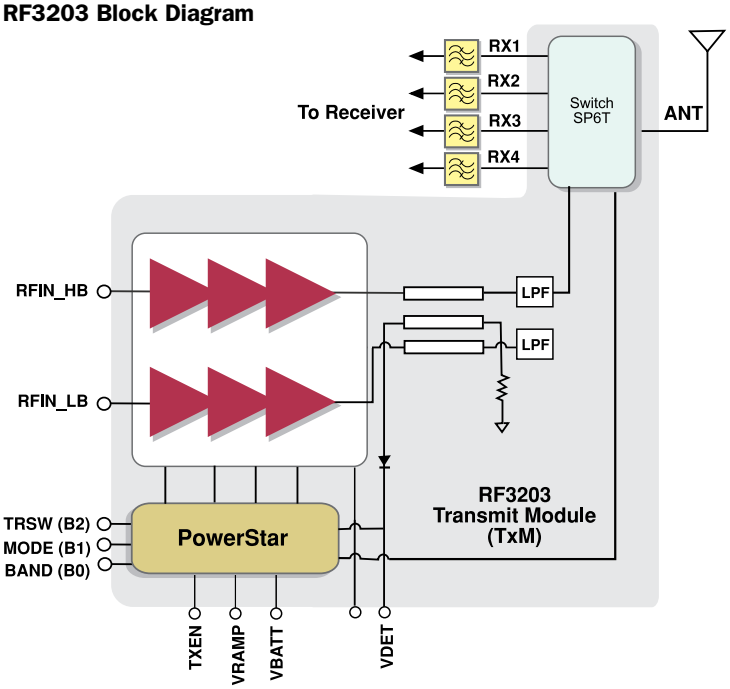
RF3161 Block Diagram



RF3203

- GSM850 / GSM900 / DCS1800 / PCS1900
- Linear EDGE transmit module
- Size: 6x7x1.2mm
- GSM Efficiency: GSM850 / GSM900 – 41% at 33dBm, DCS1800 / PCS1900 – 38% at 30dBm
- Integrated voltage reference
- Low RX insertion loss: GSM850 / GSM900 1.0dB (typ.), DCS1800 / PCS1900 1.3dB (typ.)
- Excellent harmonic performance: -40dBm (typ.)
- EDGE low power mode
- **PowerStar** II architecture
- Reduced power variation into mismatch and over extreme conditions

RF3203 Block Diagram



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what's next in RF™