

PRODUCT SUMMARY

SKY78113 SkyOne® Ultra 2.0 Front-End Module for WCDMA / LTE Bands 26, 8, 12, 13, 20, 28, 29

Applications

- CDMA / WCDMA / HSPA / HSPA+ / FDD LTE-modulated handsets for bands 26, 8, 12/17, 13, 20, 28, 29, BCO, BC10

Features

- Fully integrated LB/VLB multiband module
- Optimized for average power tracking system
- CDMA compatible
- Fully programmable Mobile Industry Processor Interface digital control
- Integrated duplexers for bands 26, 8, 12/17, 20, 28A, 28B
- MIPI®/RFFE interface
- Closed loop architecture with the Implemented coupler input/output port
- SkyShield™ shielded module
- Integrated Rx switch
- External Tx Input switch control
- Support B13 Transmit Output port
- Small, low profile package
 - 7 mm x 6 mm x 0.8 mm Max.
 - 50-pad configuration



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Description

The SKY78113 SkyOne® Ultra 2.0 is a multimode multiband (MMMB) Front-End Module (FEM) which supports 3G/4G and CDMA handsets and performs efficiently in CDMA, WCDMA, HSPA, and LTE modes. The FEM consists of a WCDMA block operating in the low bands, a logic control block for multiple power control levels, and band-enable functions in both cellular and UMTS. RF I/O ports are internally matched to 50 ohms which minimizes the need for external components. Extremely low leakage current maximizes handset standby time. The InGaP/GaAs die and passive components are mounted on a multi-layer laminate substrate and the assembly encapsulated in plastic overmold.

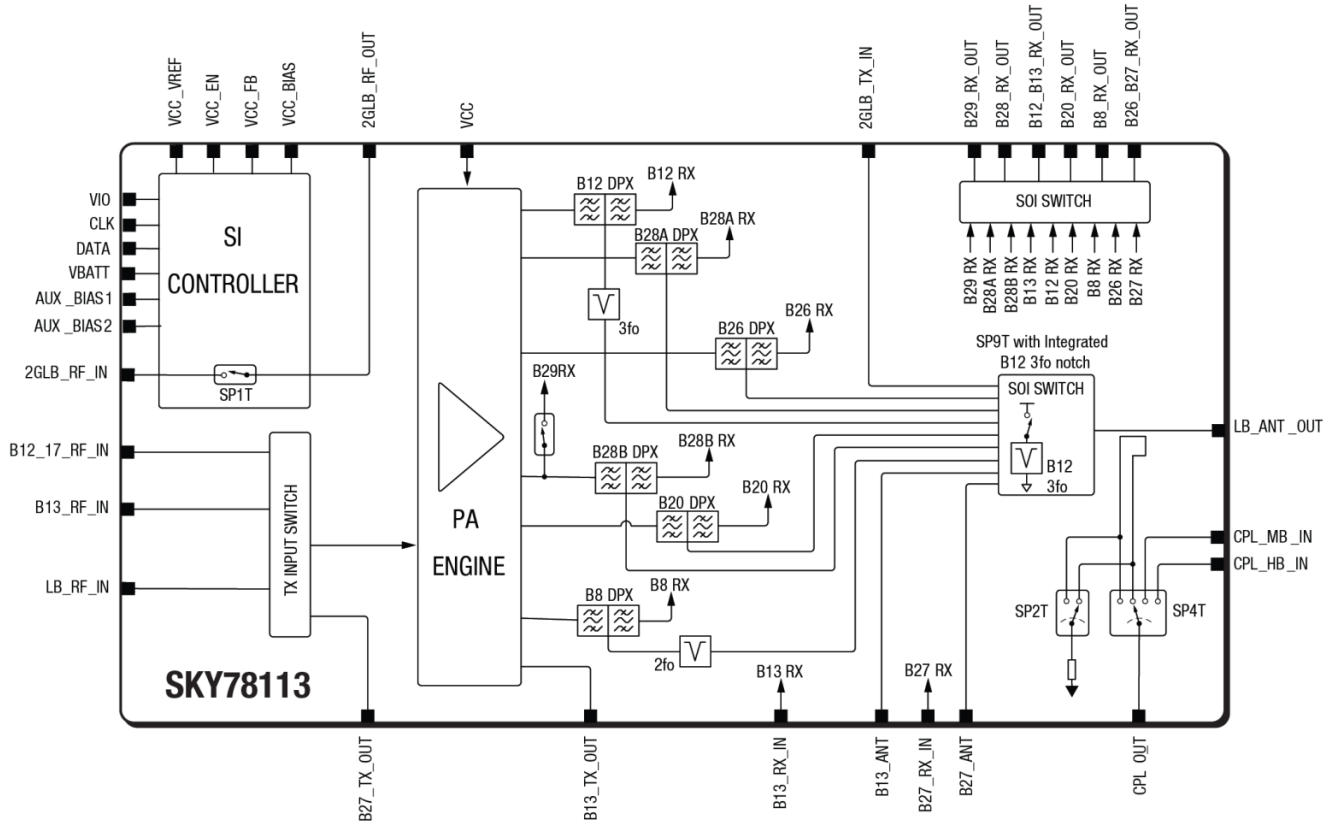
WCDMA: The SKY78113 enhanced architecture supports WCDMA/High Speed Downlink Packet Access (HSDPA) and High Speed Uplink Packet Access (HSUPA) modulations, covers multiple bands for 3GPP including bands 8 and 26 and operates at different power modes. The module is fully controllable via a MIPI® serial interface.

LTE: The SKY78113 meets spectral linearity requirements of LTE modulation with QPSK/16QAM up to 20 MHz bandwidth, including various resource block allocations, with good power-added efficiency.

CDMA: The SKY78113 meets spectral linearity requirements of CDMA2000 and EVDO Release 'A' modulation with good power-added efficiency.

Receiver Section: The SKY78113 includes integrated Duplexers, RX SAWs, and a SP9T which switch supports simultaneous Downlink Carrier Aggregation for additional Rx data rate and provides 3G/4G Rx paths from antenna to LNA port of RFIC. Carrier Aggregation (CA) requirements for noise and harmonics are designed-in for best desense performance. Optimized low insertion-loss Rx paths, matching circuits and well-grounded guard traces (high Tx–Rx isolation) inside the module mitigate desense problems and enhance sensitivity performance. With an integrated RX consolidated switch, it is feasible to match different RX port mapping on different platforms.

TRx and Rx Ports: The SKY78113 provides three TRx ports.



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Figure 1. SKY78113 Functional Block Diagram

Ordering Information

Product Name	Order Number	Evaluation Board Part Number
SKY78113 SkyOne® Ultra 2.0 Multimode Multiband Front-End Module	SKY78113-14	

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