PRODUCT SUMMARY

SKY13535-11: 0.7 to 3.0 GHz DP21T (SP12T/SP9T) MIPI Main Antenna Switch for Carrier Aggregation

Applications

- 2G/3G/4G multimode cellular handsets (LTE, UMTS, CDMA2000, EDGE, GSM)
- Carrier aggregation (LB/HB)
- Embedded data card

Features

- Low band 7 insertion loss
- Integrated B17 3rd harmonic filter on low band antenna
- Excellent B17 3rd harmonic performance: –95 dBm
- Dual antenna configuration with integrated GSM low pass filters on TX ports
- Dual antenna ports can be connected externally to an LB/HB diplexer
- Integrated MIPI interface
- Small 3.6 x 2.8 x 1.0 mm 28-lead surface mount package
- Lead (Pb)-free and RoHS-compliant (MSL3 @ 260 °C per JEDEC J-STD-020)

Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to *Skyworks Definition of Green™*, document number SQ04–0074.

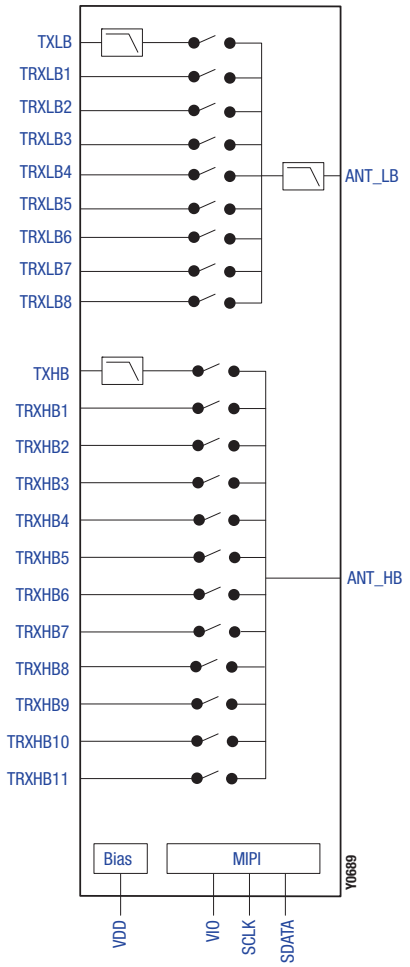

Figure 1. SKY13535-11 Functional Block Diagram

Description

The SKY13535-11 is an SP12T and SP9T with MIPI control antenna switch that is LTE-A Release 10 and Release 11 compliant. Using advanced switching technologies, the SKY13535-11 maintains low insertion loss and high isolation for both transmit and receive switching paths. The high linearity performance and low insertion loss achieved by the SKY13535-11 makes it an ideal choice for carrier aggregation applications.

The SP12T and SP9T can accommodate UMTS/C2K/EDGE/GSM/LTE applications as well as intraband carrier aggregation. There is an integrated filter in the low band side of the switch allowing all of the low band TRX ports to be used for B17. The switch also exhibits an excellent second/third order intermodulation distortion performance.

The SKY13535-11 is packaged in a small 3.6 x 2.8 x 1.0 mm 28-lead surface mount package. Switching is controlled by an integrated Mobile Industry Processor Interface (MIPI) decoder. There are separate control registers for controlling low band and high band independently. No external DC blocking capacitors are required on the RF paths as long as no DC voltage is applied. The switch can operate over the temperature range of -30°C to +90°C.

A functional block diagram of the SKY13535-11 is shown in Figure 1.

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKY13535-11: 0.7 to 3.8 GHz DP21T Switch	SKY13535-11	SKY13535-11-EVB