

**PRODUCT SUMMARY**

**SKYA21038: 0.9 to 6.0 GHz SPDT Switch**

**Applications**

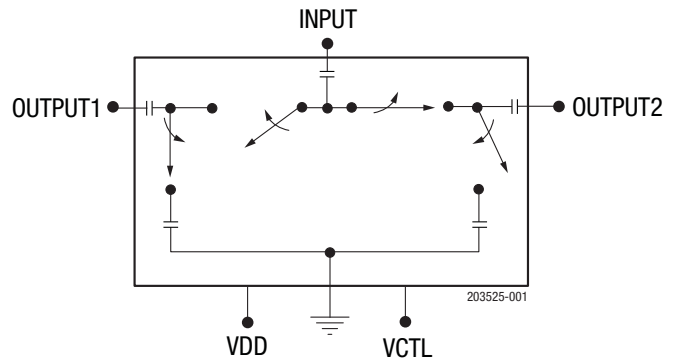
- Automotive WLAN 802.11 a/b/g/n/ac networks
- WLAN repeaters
- ISM band radios
- Low-power transmit/receive systems
- Automotive infotainment
- IoT M2M modules requiring enhanced robustness

**Features**

- AEC-Q100 grade 2 qualified
- Low insertion loss: 0.5 dB typical @ 2.45 GHz
- High isolation: 38 dB typical @ 2.45 GHz
- Excellent linearity performance:  $IP0.1dB = +31$  dBm
- Single control logic
- 1.8 V and 3.3 V logic compatibility
- Wide 3 to 5 V supply voltage range
- Integrated DC blocking capacitors
- Wide  $-40^{\circ}C$  to  $+105^{\circ}C$  operating temperature range
- Ultra-miniature, MLPD (6-pin,  $1 \times 1 \times 0.5$  mm) package (MSL1,  $260^{\circ}C$  per JEDEC J-STD-020)



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**Figure 1. SKYA21038 Block Diagram**

**Description**

The SKYA21038 is a single-pole, double-throw (SPDT) switch intended for mode switching in WLAN applications. Using advanced switching technologies, the SKYA21038 maintains low insertion loss and high isolation for all switching paths.

The high-linearity performance and low insertion loss achieved by the switch make it an ideal choice for low-power transmit/receive applications. Depending on the logic voltage applied to the control pin (VCTL), the INPUT pin is connected to one of the two switched RF outputs (OUTPUT1 or OUTPUT2) using a low insertion loss path, while the path between the INPUT pin and the other OUTPUT pin is in a high-isolation state. The switch is "reflective short" on the isolated port.

The SKYA21038 has integrated DC blocking capacitors, so no external DC blocking capacitors are required.

The switch is manufactured in a compact,  $1 \times 1 \times 0.5$  mm, 6-pin exposed pad plastic Micro Leadframe Package Dual (MLPD) package.

A functional block diagram is shown in Figure 1.

## Ordering Information

Part Number	Product Description	Evaluation Board Part Number
SKYA21038	0.9 to 6.0 GHz SPDT Switch	SKYA21038-EVB

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