

GENERAL DESCRIPTION

The F2914 is a high reliability, low insertion loss, 50 Ω SP4T absorptive RF switch designed for a multitude of wireless and other RF applications. This device covers a broad frequency range from 400 MHz to 8000 MHz. In addition to providing low insertion loss, the F2914 also delivers excellent linearity and isolation performance while providing a 50 Ω termination to the unused RF ports. The F2914 also includes a patent pending constant impedance (K_Z) feature. K_Z improves system hot switching ruggedness, minimizes LO pulling in VCOs, and reduces phase and amplitude variations in distribution networks. It is also ideal for dynamic switching/selection between two or more amplifiers while avoiding damage to upstream/downstream sensitive devices such as PAs and ADCs.

The F2914 uses a single positive supply voltage supporting three logic control pins using either 3.3 V or 1.8 V control logic. Connecting a negative voltage to pin 20 disables the internal negative voltage generator and becomes the negative supply.

COMPETITIVE ADVANTAGE

The F2914 provides constant impedance in all RF ports during transitions improving a system's hot-switching ruggedness. The device also supports high power handling, and high isolation; particularly important for DPD receiver use.

- ✓ Constant impedance $K_{|Z|}$ during switching transition
 - ✓ RFX to RFC Isolation = 50 dB*
 - ✓ Insertion Loss = 1.1 dB*
 - ✓ IIP3: +61 dBm*
 - ✓ Extended temperature: -40 °C to +105 °C
- * 4 GHz

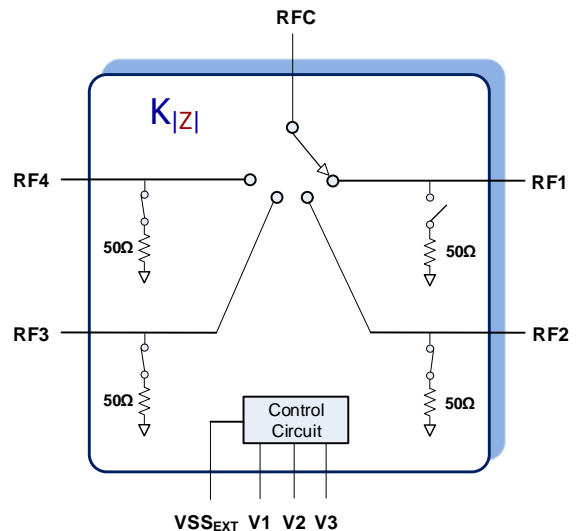
APPLICATIONS

- Base Station 2G, 3G, 4G
- Portable Wireless
- Repeaters and E911 systems
- Digital Pre-Distortion
- Point to Point Infrastructure
- Public Safety Infrastructure
- Military Systems, JTRS radios
- Cable Infrastructure
- Test / ATE Equipment

FEATURES

- Four symmetric, absorptive RF ports
- High Isolation: 50 dB @ 4000 MHz
- Low Insertion Loss: 1.1 dB @ 4000 MHz
- High linearity:
 - IIP2 of 124 dBm @ 2000 MHz
 - IIP3 of 61 dBm @ 4000 MHz
- High Power Handling:
 - 33 dBm CW on selected RF port
 - 27 dBm on terminated ports
- Single 3.0 V to 5.25 V supply voltage
- External Negative Supply Option
- 3.3 V and 1.8 V compatible control logic
- Operating temperature -40 °C to +105 °C
- 4 mm x 4 mm 24 pin QFN package
- Pin compatible with competitors

FUNCTIONAL BLOCK DIAGRAM



ORDERING INFORMATION

