



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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#### GENERAL DESCRIPTION

The F2914 is a high reliability, low insertion loss, 50  $\Omega$  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  $\Omega$  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  $^{\circ}$ C to +105  $^{\circ}$ C
- \* 4 GHz

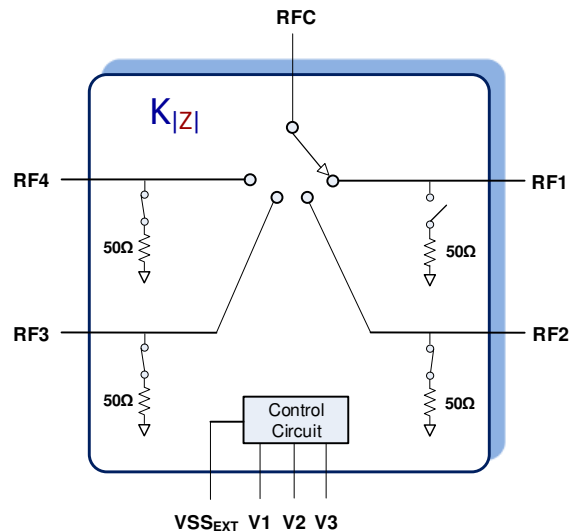
#### APPLICATIONS

- 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  $^{\circ}$ C to +105  $^{\circ}$ C
- 4 mm x 4 mm 24 pin QFN package
- Pin compatible with competitors

#### FUNCTIONAL BLOCK DIAGRAM



#### ORDERING INFORMATION

