

BGSA142GN12

High RF Voltage SP4T Switch

Features

- Designed for high linearity and high RF voltage tuning applications
- Multiple selectable switch configurations:
Each throw directly and independently controlled
- Low R_{ON} resistance of 1.75 Ω at each port in ON state
- Low C_{OFF} capacitance of 110 fF at each port in OFF state
- High RF operating voltage of 72 V at RFx and 67 V at RFC in OFF state
- Low harmonic generation
- 3 GPIO pins control interface
- Supply voltage range: 1.65 to 3.6 V
- No RF parameter change within supply voltage range
- Small form factor 1.5 mm x 1.5 mm (MSL1, 260° C per JEDEC J-STD-020)
- RoHS and WEEE compliant package



Description

The BGSA142GN12 is a versatile direct mapping Single-Pole Quad Throw (SP4T) RF switch optimized for low C_{OFF} as well as low R_{ON} enabling applications up to 6.0 GHz. GPIO digital control lines offer the possibility to adopt SP4T, SPDT along with SPST topology for an optimum flexibility in RF Front-End designs.

The BGSA142GN12 includes 4 low R_{ON} and high RF voltage ports making it ideal for antenna tuning and tunable matching network applications. RFC as well as RF1, RF2, RF3 and RF4 can handle high RF Voltage (bidirectional RF Voltage handling). Due to its very high RF voltage ruggedness on all RF ports, it is suited for switching any reactive devices such as inductors and capacitors without significant losses.

Unlike GaAs technology, the 0.1 dB compression point exceeds the switch maximum input power level, resulting in linear performance at all signal levels and external DC blocking capacitors at the RF ports are only required if DC voltage is applied externally.

Block diagram and ordering information

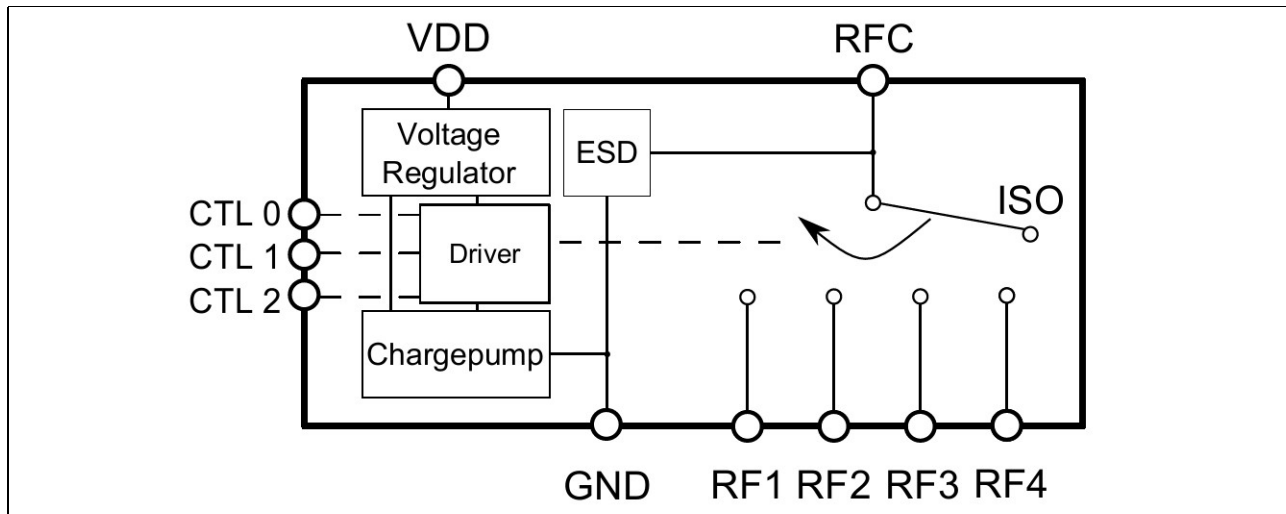


Figure 1 BGSA142GN12 Block diagram

Table 1 Ordering Information

Type	Package	Marking
BGSA142GN12	TSNP-12-1	4C



WEEE Compliant
Package



Halogen-Free
PB Free



RoHS

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Email: erratum@infineon.com

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