THE DATASHEET OF

BGSA142MN12E6327XTSA1

www.win-source.net 0086-755-83957316

BGSA142MN12

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
- MIPI 2.0 RFFE control interface
- 4 USID addresses enabled by external condition at USID_sel pin and SCLK/SDATA swap mode
- Supply voltage range: 1.65 to 1.95 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 BGSA142MN12 is a versatile direct mapping Single-Pole Quad Thro (SP4T) RF switch optimized for low C_{OFF} as well as low R_{ON} enabling applications up to 6.0 GHz. Including a MIPI RFFE digital control interface, all the throw states can be programmed in the same RFFE command enabling SP4T, SP3T, SPDT along with SPST topology for a better flexibility in RF Front-End designs.

The BGSA142MN12 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

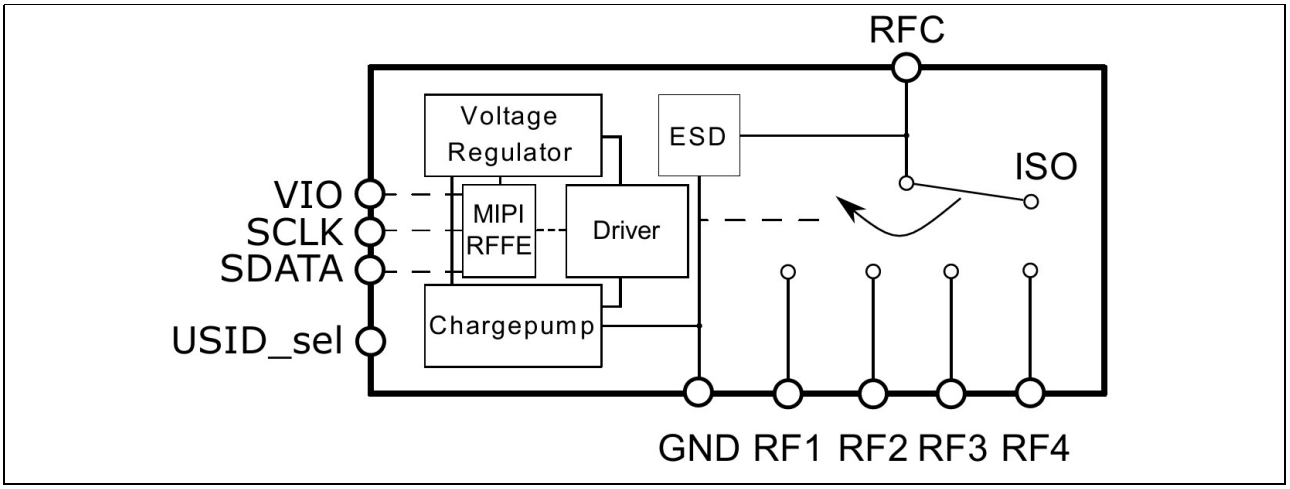


Figure 1 BGSA142MN12 Block diagram

Table 1 Ordering Information

Type	Package	Marking
BGSA142MN12	TSNP-12-1	4B

WEEE Compliant Package

Halogen-Free PB Free

RoHS

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Edition 2019-09-16
Published by
Infineon Technologies AG
81726 München, Germany

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Document reference
ifx1

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