

BGSA402ML10

Low Resistance Antenna Tuning Shunt Switch

Features

- Designed for high-linearity antenna aperture switching and RF tuning applications
- Multiple selectable switch configurations
- Ultra low R_{ON} resistance of $1.49\ \Omega$ in ON state
- Low C_{OFF} capacitance of 170 fF in OFF state
- High RF operating voltage OFF state handling of $>45\text{ V}$
- Low harmonic generation
- MIPI RFFE 2.1 compliant control interface
- Support 2 default USID via USID_Sel pin state
- Supply voltage range: 1.65 to 3.6 V
- No RF parameter change within supply voltage range
- Small form factor 1.1 mm x 1.5 mm, MSL1, 260° C per JEDEC J-STD-020
- RoHS and WEEE compliant package



Description

BGSA402ML10 is a versatile Shunt to Ground 4xSingle-Pole Single-Throw (4xSPST) RF antenna tuning switch. It is optimized for low C_{OFF} as well as low R_{ON} enabling applications up to 6 GHz.

BGSA402ML10 is ideal for antenna tuning application. This chip integrates on-chip CMOS logic and Power Supply regulation. Its digital control interface is compliant with MIPI2.1 RFFE specification and each switch throw can be programmed individually or all together in the same RFFE command frame. Up to 2 instantiations of the same device can be controlled using the same RFFE bus thanks to its 2 states USID_Sel pin.

Unlike GaAs technology, the 0.1 dB compression point exceeds the switch maximum input power level, resulting in excellent linear performance at all signal levels within the operating conditions. External DC blocking capacitors at the RF ports are only required if DC voltage is applied externally. Due to its high RF voltage ruggedness, it is suited for switching any reactive device such as inductor and capacitor in RF matching circuits without significant losses.

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Block diagram and ordering information

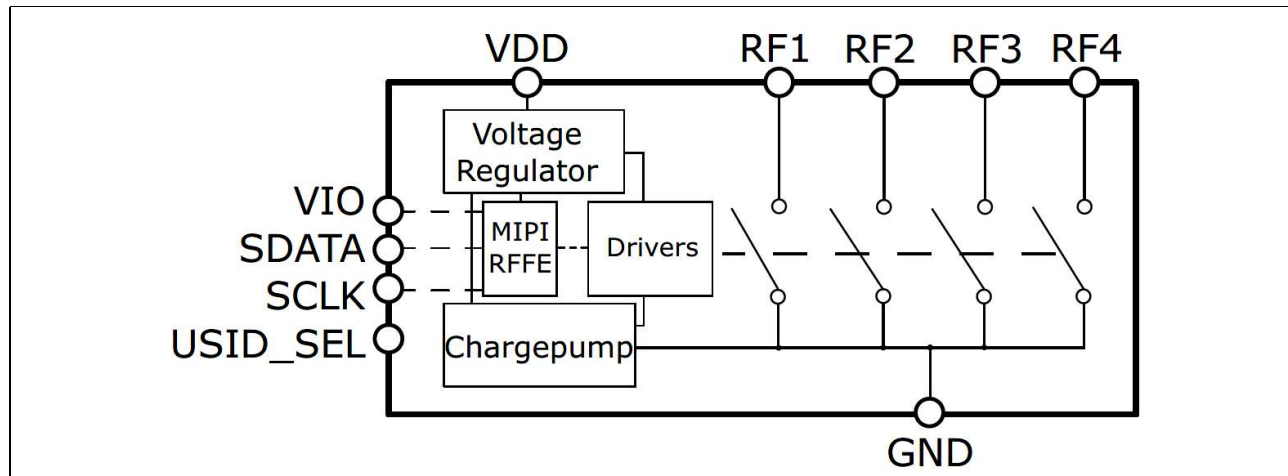


Figure 1 BGSA402ML10 Block diagram

Table 1 Ordering Information

Type	Package	Marking
BGSA402ML10	TSLP-10-2	4S



WEEE Compliant
Package



Halogen-Free
PB Free



RoHS

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