

BGSA143ML10

Low Resistance Antenna Tuning Switch

Features

- Designed for high-linearity antenna tuning switching and RF tuning applications
- Ultra low R_{ON} resistance of 1.15Ω at each port in ON state
- Low C_{OFF} capacitance of 140 fF at each port in OFF state
- Each Switch chain directly controlled, R_{ON} reducible down to 0.3Ω
- High RF operating peak voltage handling of 42 V in OFF state
- Low harmonic generation
- MIPI RFFE control interface
- External USID_sel pin enabling 4 default USID address
- No RF parameter change within supply voltage range
- Small form factor $1.1 \times 1.5 \text{ mm}^2$ (MSL1, 260°C per JEDEC J-STD-020)
- RoHS and WEEE compliant package



Description

BGSA143ML10 is a versatile Single-Pole Quad Throw (SP4T) RF antenna tuning switch featuring open or short reflective ports, being optimized for tuning applications up to 6.0 GHz . Including a RFFE digital control interface, this switch offers the possibility to adopt a SP4T, SP3T, SPDT along with SPST topology for a better flexibility in RF Front-End designs.

BGSA143ML10 includes 4 ultra-low R_{ON} series ports and 4 individually switchable shunt switches to enable open reflective and short-reflective behavior. As a result any type of antenna tuning switching or tuner circuits can be realized. This single supply chip integrates on-chip CMOS logic driven by a simple, single-pin CMOS or TTL compatible control input signal. 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. Due to its very high RF voltage ruggedness, it is suited for switching any reactive devices such as inductors and capacitors in RF matching circuits without significant losses in quality factors.

Block diagram and ordering information

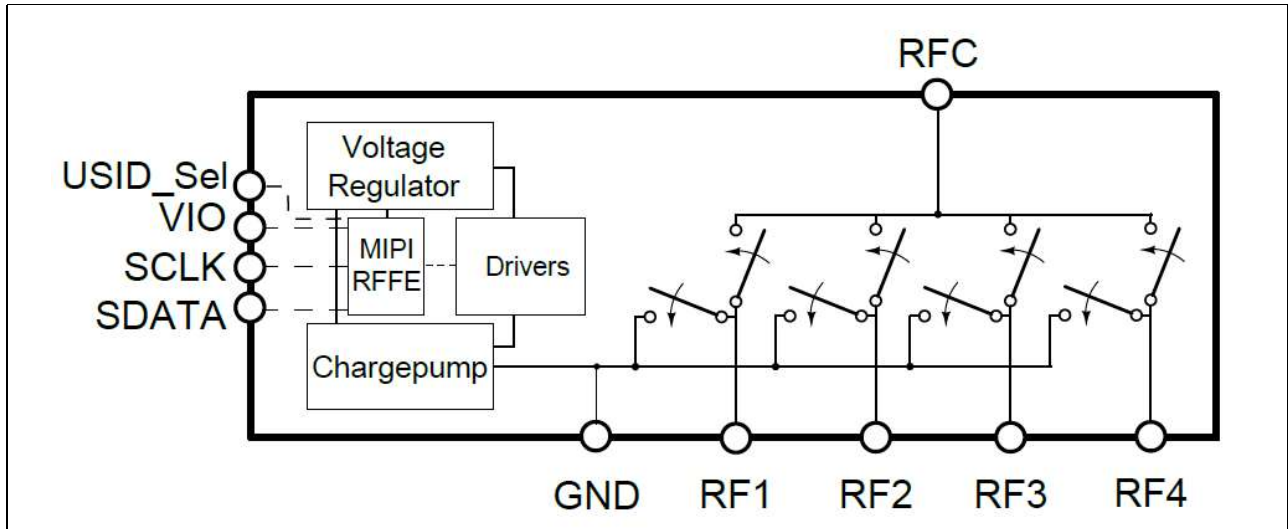


Figure 1 BGSA143ML10 Block diagram

Table 1 Ordering Information

Type	Package	Marking
BGSA143ML10	TSLP-10	AA



WEEE Compliant Package



Halogen-Free
PB Free



RoHS

Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

Edition 2018-11-15

Published by

Infineon Technologies AG

81726 München, Germany

© 2018 Infineon Technologies AG.

All Rights Reserved.

Do you have a question about this document?

Email: erratum@infineon.com

Document reference

ifx1

IMPORTANT NOTICE

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie").

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer's compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer's products and any use of the product of Infineon Technologies in customer's applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer's technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

For further information on the product, technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies office (www.infineon.com).

WARNINGS

Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies' products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [RF Switch ICs](#) category:

Click to view products by [Infineon](#) manufacturer:

Other Similar products are found below :

[MASW-008853-TR3000](#) [MASW6010G](#) [BGSX210MA18E6327XTSA1](#) [CG2185X2](#) [CG2415M6](#) [MA4AGSW1A](#) [MA4SW410](#)
[MA4SW410B-1](#) [MASW-002102-13580G](#) [MASW-005100-11940W](#) [BGS 12PL6 E6327](#) [BGS1414MN20E6327XTSA1](#)
[BGS1515MN20E6327XTSA1](#) [SKY13374-397LF](#) [CG2415M6-C2](#) [AS222-92LF](#) [MASWSS0201TR](#) [MASW-007075-000100](#) [MASW-004103-](#)
[13655P](#) [MASW-003102-13590G](#) [MASWSS0202TR-3000](#) [MASW-008543-TR3000](#) [MA4SW310B-1](#) [SW-313-PIN](#) [CG2430X1](#) [SKY13405-](#)
[490LF](#) [SKYA21001](#) [SKY13415-485LF](#) [MMS008PP3](#) [SKY13319-374LF](#) [SKY13404-466LF](#) [SKY13473-569LF](#) [SKY13626-685LF](#)
[NJG1809ME7-TE1](#) [SKY13343-92LF](#) [MASW-002103-13635P](#) [SKY13417-485LF](#) [MASW-004103-13650P](#) [NJG1649HB6](#)
[RFASWE660DTF03](#) [BGSA14GN10E6327](#) [FM1694C](#) [XMSS1R6G0PA-001](#) [AW13612FLR](#) [AW13102DNR](#) [FM3418C](#) [AW13508QNR](#)
[AW13418RQNR](#) [FM8648M](#) [FM8545](#)