

BGS12A

Tiny, but ESD-robust SPDT switch with no external components required



THE BGS12A is Infineon's first product in its new Radio Frequency (RF) switch family. The BGS12A is a general purpose Single-Pole, Double-Throw (SPDT) RF switch, designed for power levels of up to 20dBm, with a P-1dB above 30dBm.

Product features

Manufactured using a unique RF-CMOS technology, this switch does not require external DC-blocking capacitors and the control logic is fully integrated. All interfaces are protected against Electrostatic Discharge (ESD) of at least 1.5kV HBM (Human Body Model). The BGS12A comes in a fine-pitch Wafer-Level Package (WLP), offering smallest size and height. It is ideal for use in low and medium-power applications up to 3GHz.

Customer Values

- Cost and space saving by reduced BOM
- Improved yield due to less ESD failures during production
- 60% less PCB/LTCC space compared with smallest packaged product on the market
- Reduced filter effort due to low harmonic level

Features

- Fine-pitch WLP with smallest dimensions at 0.79 x 0.54mm²
- ESD of at least 1.5kV HBM at all ports
- No external blocking capacitor required
- On-chip control logic
- Single control line
- Low harmonic distortion

Applications

- RF modules
- Mobile phones
- Game consoles
- Data cards
- Tuners
- Remote Keyless Entry (RKE) systems

Electrical key parameter of BGS12A

| Frequency [GHz] | Insertion loss [dB] | Isolation [dB] | P-1dB [dBm] | 2nd/3rd harmonic [dBc] |
|-----------------|---------------------|----------------|-------------|------------------------|
| 1.0 | 0.3 | 34 | >30 | -90 |
| 2.0 | 0.6 | 27 | >30 | -90 |

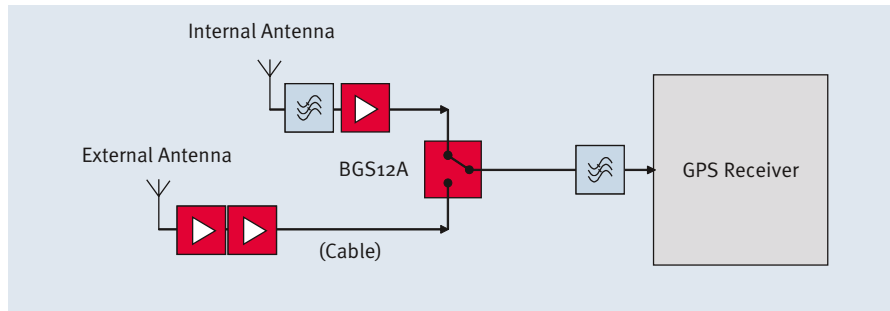
www.infineon.com/RFswitches

Small Signal Discretes

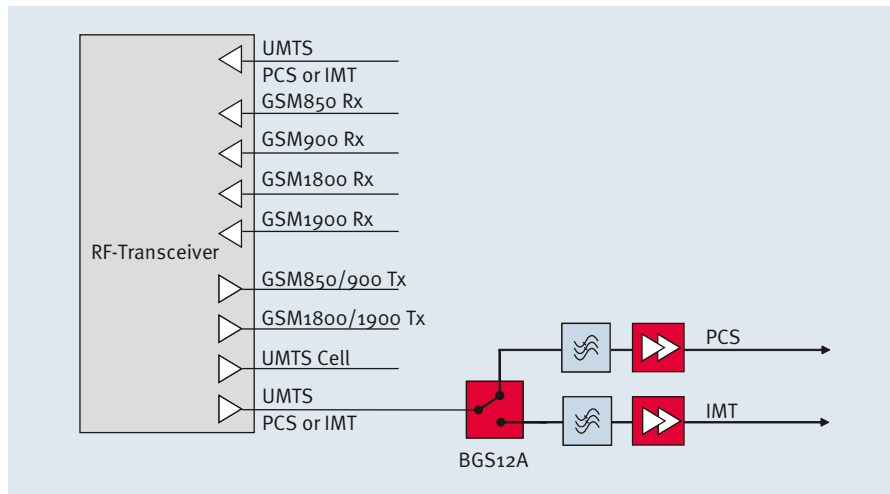


Never stop thinking

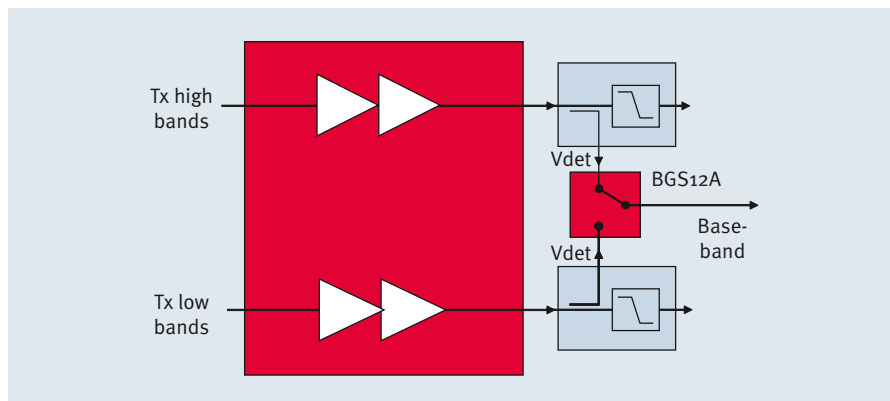
Application Examples



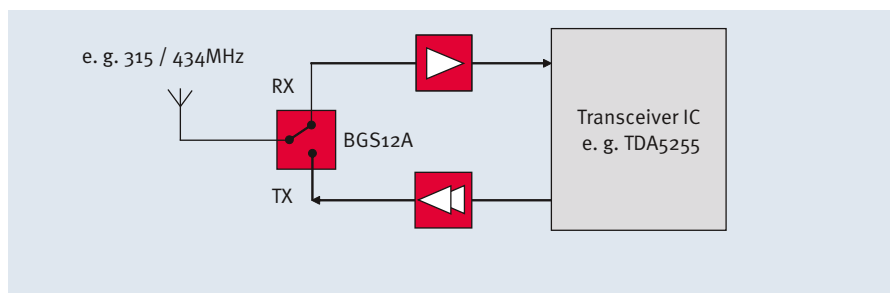
GPS receiver with 2nd external antenna



UMTS-multiband application with interstage switch



Power detection switch used in Dual Band Power Amplifier



RKE / Car Alarm Transceiver Solution (KeyFob and Car Unit)

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Information

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