BGC100GN6
Switchable Wideband Directional Coupler IC

Features
- Fully integrated coupler in RF CMOS
- Bi-directional coupler
- Fitted for feedback receivers to accomplish closed loop power control and antenna tuning
- Frequency range: 0.6 to 2.7 GHz
- Designed for low insertion loss and high directivity
- Supports all cellular standards: GSM/WCDMA / HSPA+ / FDD-LTE / TDLTE / TD-SCDMA / CDMA
- Integrated low-pass filter for 5GHz WiFi jammers suppression
- GPIO controlled
- Supply voltage range: 1.6 to 3.4V
- Small form factor 1.1mm x 0.7mm
- RoHS and WEEE compliant package

Description
The BGC100GN6 bi-directional coupler IC is designed for 2G/3G/4G RF front end applications. The device contains a bidirectional coupler operating in one or multiple bands within 0.6 to 2.7 GHz frequency range. The coupled output contains a low-pass filter for 5 GHz ISM blockers suppression. The coupler offers low insertion loss and high directivity.

The coupler is controlled via a GPIO pin. No external power supply blocking or RF decoupling capacitors are required. The BGC100GN6 is a fully integrated device deploying Infineon high volume RF-CMOS technology. The device has a very small size of only 1.1 x 0.7mm² and a maximum height of 0.4 mm.
Block diagram and ordering information

![Block diagram of BGC100GN6 Switchable Wideband Directional Coupler IC](image)

**Figure 1** BGC100GN6 Block diagram

<table>
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<tr>
<th>Type</th>
<th>Package</th>
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</tr>
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<tr>
<td>BGC100GN6</td>
<td>TSNP-6-2</td>
<td>2</td>
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**Table 1** Ordering Information

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