

BGF200

Mircophone Filter and ESD Protection Evaluation Kit

RF & Protection Devices



Never stop thinking

Edition 2007-02-21

**Published by
Infineon Technologies AG
81726 München, Germany**

**© Infineon Technologies AG 2009.
All Rights Reserved.**

LEGAL DISCLAIMER

THE INFORMATION GIVEN IN THIS APPLICATION NOTE IS GIVEN AS A HINT FOR THE IMPLEMENTATION OF THE INFINEON TECHNOLOGIES COMPONENT ONLY AND SHALL NOT BE REGARDED AS ANY DESCRIPTION OR WARRANTY OF A CERTAIN FUNCTIONALITY, CONDITION OR QUALITY OF THE INFINEON TECHNOLOGIES COMPONENT. THE RECIPIENT OF THIS APPLICATION NOTE MUST VERIFY ANY FUNCTION DESCRIBED HEREIN IN THE REAL APPLICATION. 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) WITH RESPECT TO ANY AND ALL INFORMATION GIVEN IN THIS APPLICATION NOTE.

Information

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

Warnings

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

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

Mircophone Filter and ESD Protection Evaluation Kit**Revision History: 2007-02-21, Rev. 1.2****Previous Version: 2006-02-21, Rev. 1.1**

Page	Subjects (major changes since last revision)
1	Titel change

1 BGF200 Microphone Filter and ESD Protection Evaluation Kit

1.1 Description

The BGF200 is a microphone filter with low pass characteristic offering a very high stop band attenuation up to 6 GHz. All pins are protected against ESD. The wafer level package is a green package with a size of only 1.6 mm x 1.6 mm and a total height of 0.65 mm.

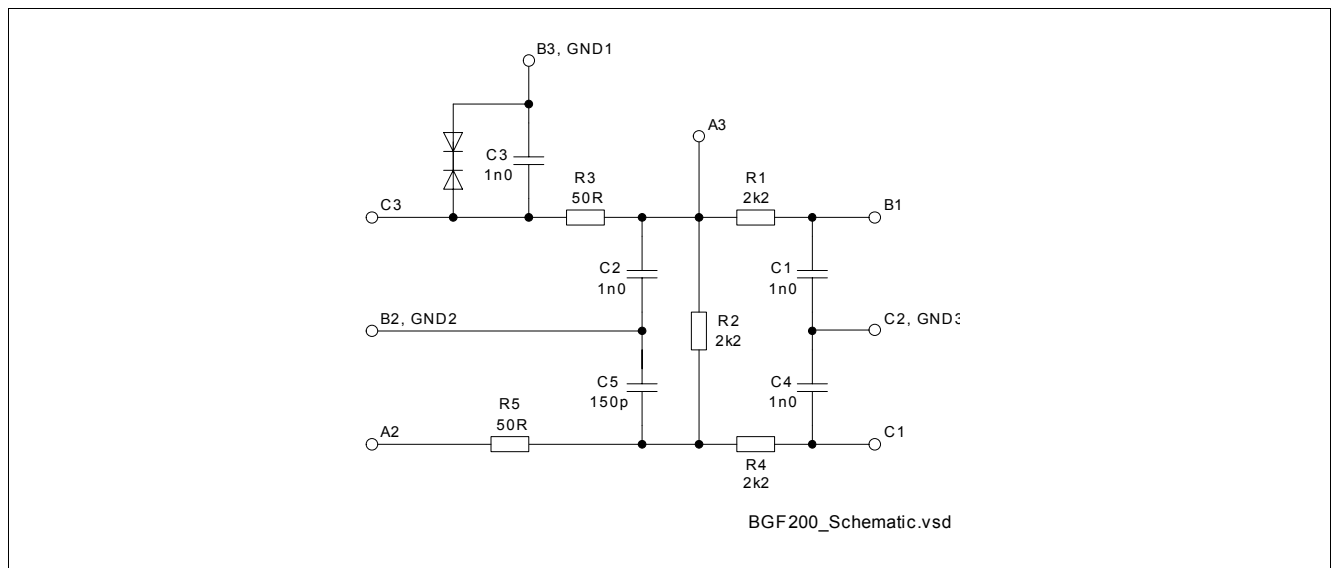


Figure 1 Schematic

The evaluation kit for the BGF200 microphone filter IC consists of two printed circuit boards:

- DC board
- RF board

1.2 DC Board



Figure 2 DC evaluation board

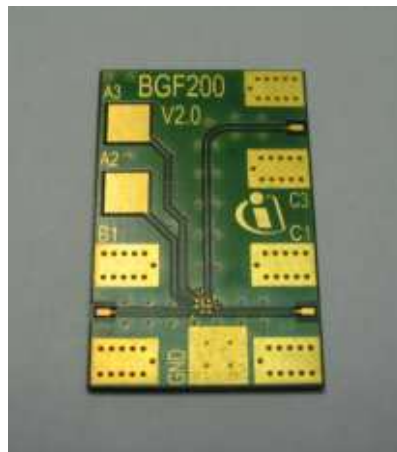
BGF200 Microphone Filter and ESD Protection Evaluation Kit

Figure 2 shows the DC evaluation board used in this evaluation kit. This PCB was designed to be mounted with two BGF200. On the left hand side the HiPAC IC is soldered to the board while the right hand side of the board was left open to show the footprint required for BGF200.

The size of the board is 15 mm by 38 mm. The pitch size of the pads is 2.54 mm.

This board was designed to perform pin-to-pin DC tests, like measuring the values of the integrated resistors, as well as checking the ESD performance of the IC. It can also be used for qualification purposes.

1.3 RF Board



Bgf200_rf_bb.vsd

Figure 3 Bare RF Board



Bgf200_rf_pb.vsd

Figure 4 Populated RF Board

BGF200 Microphone Filter and ESD Protection Evaluation Kit

Figure 3 shows an unpopulated RF board for testing BGF200. It offers the possibility to measure the RF performance of the two signal lines C3-B1 and C3-C1.

Figure 4 shows a fully assembled RF board. The size of this board is 20 mm by 31 mm, not including the SMA connectors.

1.3.1 RF Measurement Curves

Figure 5 shows the RF performance of the BGF200, it was measured in a 50 Ω system. The typical transmission characteristics of both signal lines are displayed, C3-B1 in blue and C3-C1 in magenta.

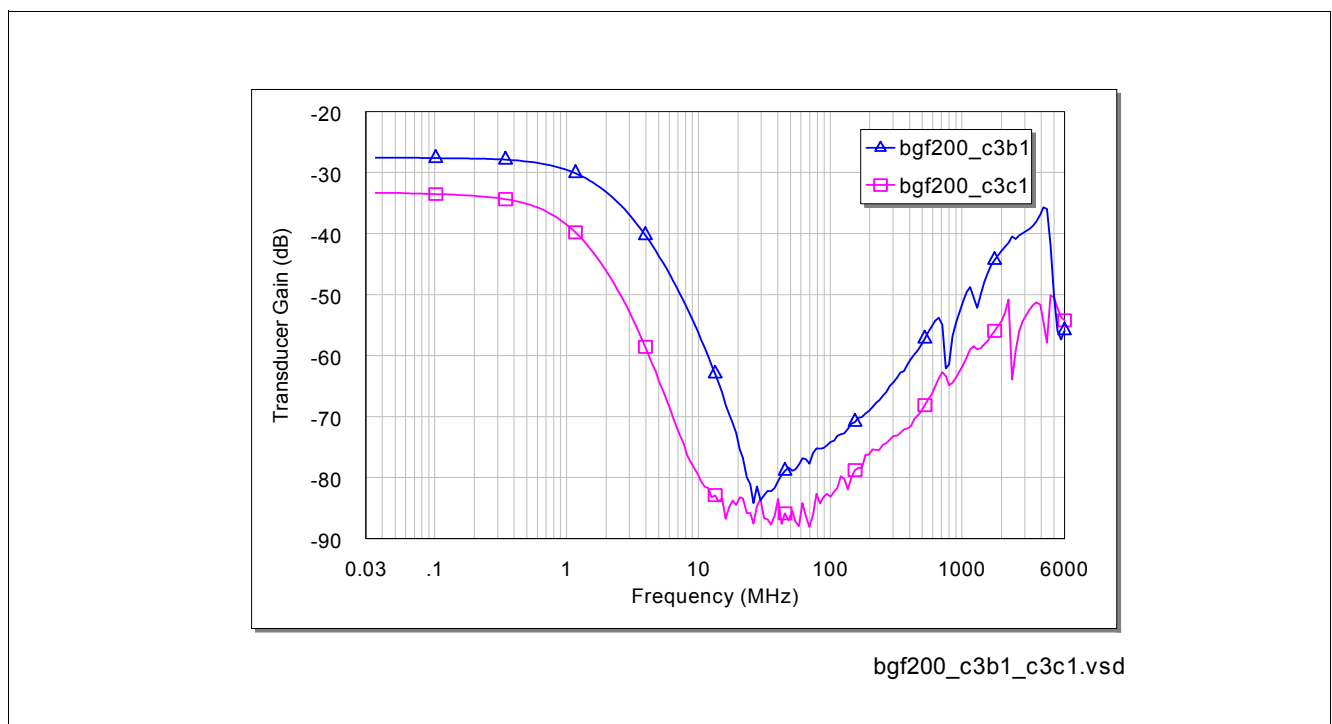


Figure 5 RF Performance of the BGF200