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# BGF200

## Mircophone Filter and ESD Protection Evaluation Kit

RF & Protection Devices



Never stop thinking

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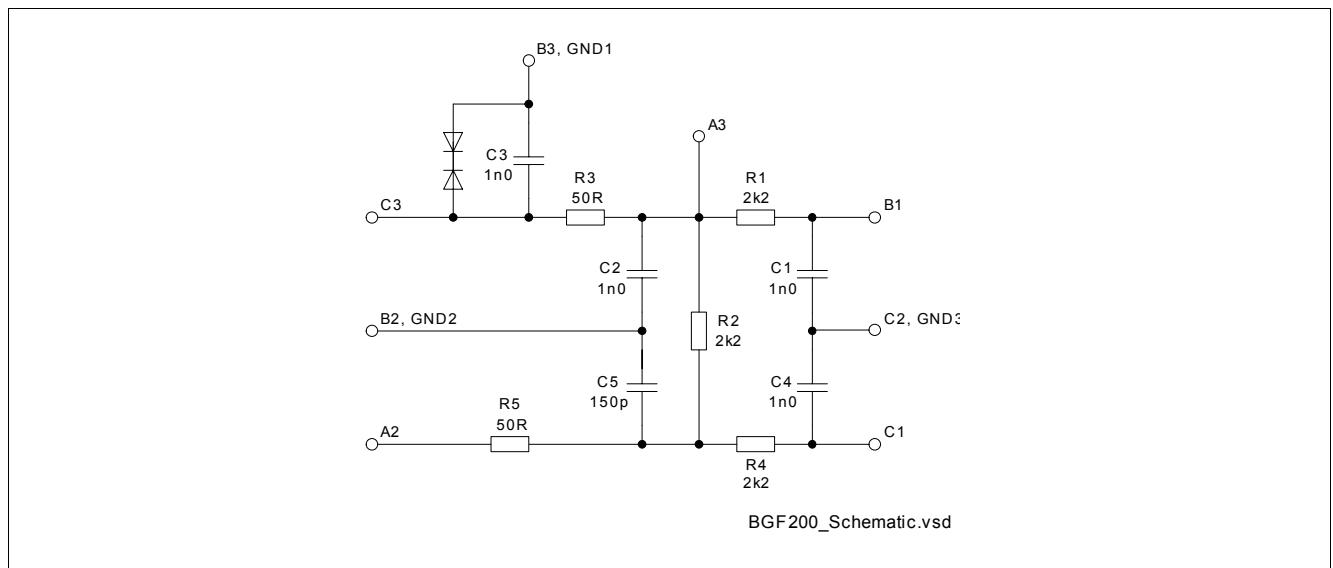
**Mircophone Filter and ESD Protection Evaluation Kit****Revision History: 2007-02-21, Rev. 1.2****Previous Version: 2006-02-21, Rev. 1.1**

<b>Page</b>	<b>Subjects (major changes since last revision)</b>
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.

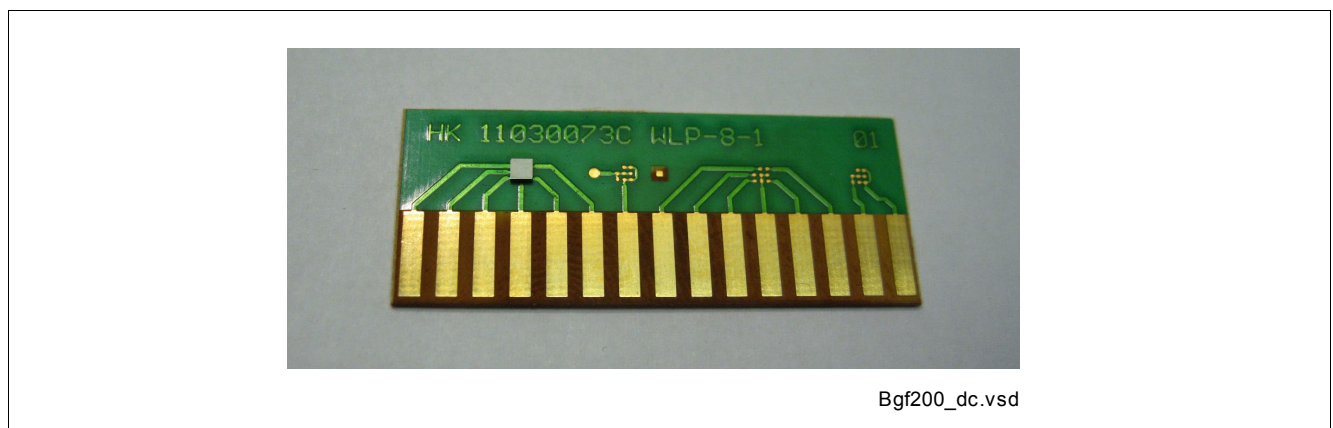


**Figure 1 Schematic**

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**



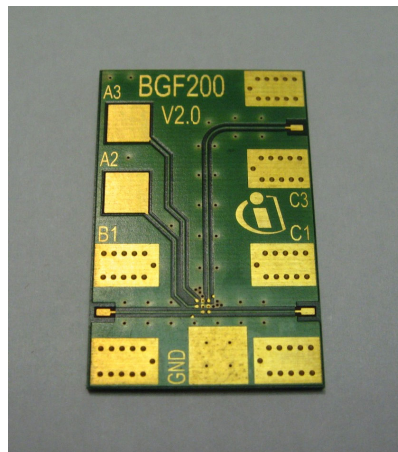
## BGF200 Microphone Filter and ESD Protection Evaluation Kit

**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**

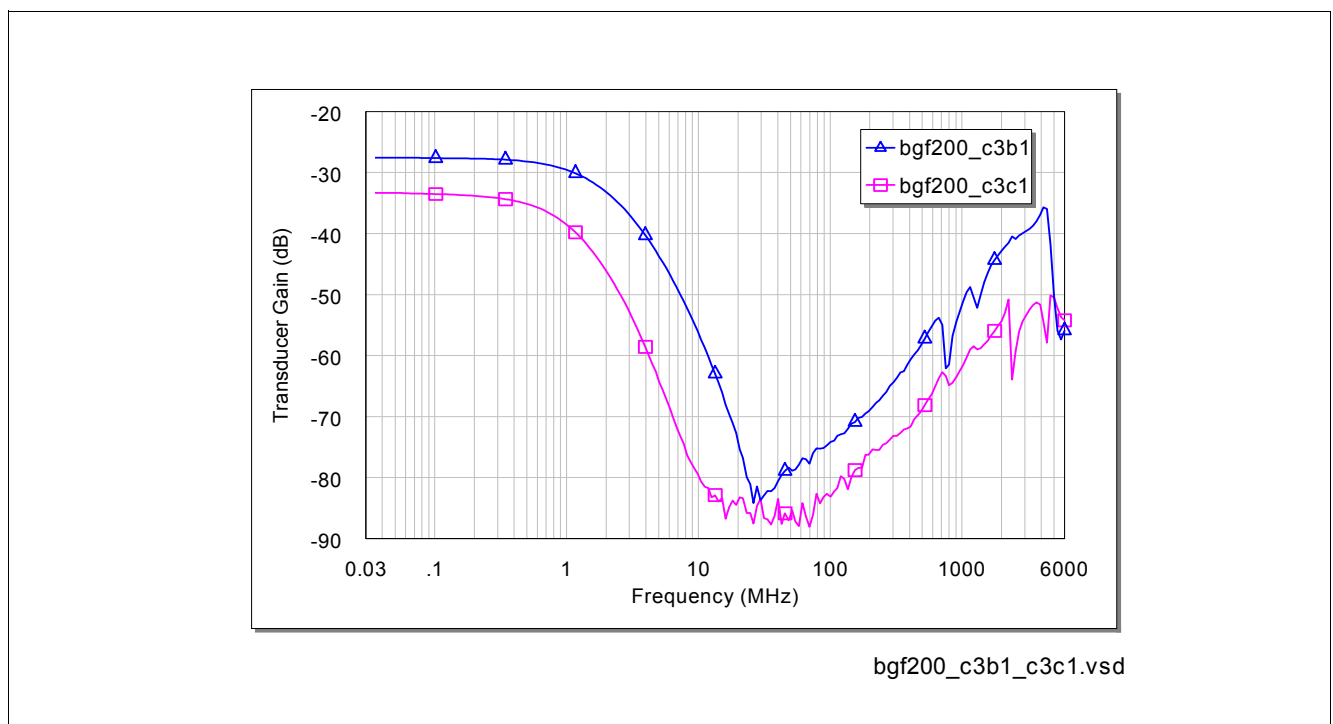
## BGF200 Microphone Filter and ESD Protection Evaluation Kit

**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  $\Omega$  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**