单通道高速运算放大器评估板
（8引脚、SOIC封装，带专用反馈引脚和裸露焊盘）

特性
可快速实现试验板试验/原型操作
用户自定义电路配置
支持边缘安装型SMA连接器
可轻松连接至测试设备和其它电路

概述
EB-O8REDF-1Z旨在帮助用户评估单通道、高速运算放大器。EB-O8REDF-1Z是裸板（即评估板上未焊接任何器件），用户可以快速完成各种运算放大器电路的原型设计，从而最大程度地降低风险，加快产品上市。EB-O8REDF-1Z评估板支持ADI公司所有采用8引脚SOIC封装并带专用反馈引脚和裸露焊盘的单通道高速运算放大器。

图1显示的是评估板的器件侧，而图2显示的是评估板的电路侧。图3显示的是评估板原理图。

该4层评估板的输入端和输出端支持边缘安装型SMA连接器，可高效快速连接至测试设备或其它电路。

评估板接地层、器件放置和电源旁路经过优化设计，可以最大程度地提高电路的灵活性和性能。评估板支持多种SMT元件尺寸：0402、0508、0603和7343。

图4和图6显示的是评估板装配图。图5和图7显示的是将评估板连接到运算放大器和支持电路的金属布局图。
目录
特性............................................................................................................................ 1
概述........................................................................................................................... 1
评估板的器件侧和电路侧图片.............................................................. 1
修订历史 ........................................................................................................... 2
评估板原理图、装配图和布局图 ....................................................... 3
同相配置 ........................................................................................................ 5
订购信息 ........................................................................................................ 6
物料清单 ........................................................................................................ 6

修订历史
2010年3月—修订版0至修订版A
EB-O8RE-1Z改为EB-O8REDF-1Z ............................................................... 通篇
增加“同相配置”部分 ........................................................................... 5
增加“订购信息”部分 ........................................................................... 6

2010年2月—修订版0，初始版
图 3. EB-O8REDF-1Z 通用评估板原理图
图4. 评估板器件侧装配图

图5. 评估板器件侧布局图

图6. 评估板电路侧装配图

图7. 评估板电路侧布局图
同相配置
在同相配置中使用本评估板时，如果增益大于1，则建议通过以下两种方式放置增益电阻。第一种方法是将增益电阻放在R1位置，并R2位置使用0Ω短接至地。第二种方法是将增益电阻放在R1的第一个焊盘与地之间，而不使用第二个电阻（参见图8）。

图8. 增益大于1时的同相配置
## 订购信息

### 物料清单

<table>
<thead>
<tr>
<th>数量</th>
<th>索引标识符</th>
<th>描述</th>
<th>封装</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>+IN, −IN, OUT</td>
<td>SMA/SMT</td>
<td>SMA/SMT</td>
</tr>
<tr>
<td>2</td>
<td>C1, C7</td>
<td>用户自定义电容</td>
<td>C0402</td>
</tr>
<tr>
<td>2</td>
<td>C8, C9</td>
<td>0.01 μF电容</td>
<td>C0402</td>
</tr>
<tr>
<td>3</td>
<td>C2, C5, C6</td>
<td>0.1 μF电容</td>
<td>C0508</td>
</tr>
<tr>
<td>2</td>
<td>C3, C4</td>
<td>10 μF电容</td>
<td>C6032</td>
</tr>
<tr>
<td>6</td>
<td>R1, R2, R3, R4, R5, R8</td>
<td>用户自定义电阻</td>
<td>R0402</td>
</tr>
<tr>
<td>3</td>
<td>R9, R10, RPD</td>
<td>用户自定义电阻</td>
<td>R0603</td>
</tr>
<tr>
<td>2</td>
<td>R6, R7</td>
<td>1 kΩ</td>
<td>R0603</td>
</tr>
<tr>
<td>7</td>
<td>PD/DIS, GND1, GND2, GND3, GND4, +VS, −VS</td>
<td>测试点</td>
<td>TP</td>
</tr>
<tr>
<td>1</td>
<td>PWR</td>
<td>接头3 POS</td>
<td>Molex 22-23-2031</td>
</tr>
<tr>
<td>1</td>
<td>PD/DIS</td>
<td>3引脚直插接头</td>
<td>Molex 22-03-2031</td>
</tr>
<tr>
<td>2</td>
<td>JP1, JP2</td>
<td>用户自定义电容</td>
<td>焊接跳线</td>
</tr>
<tr>
<td>1</td>
<td>U1</td>
<td>放大器</td>
<td>8引脚SOIC</td>
</tr>
</tbody>
</table>
注释
注释

ESD警告

ESD（静电放电）敏感器件。带电器件和电路板可能会在没有察觉的情况下放电。尽管该产品具有专利或专用保护电路，但在遇到高能量ESD时，器件可能会损坏。因此，应当采取适当的ESD防护措施，以避免器件性能下降或功能丧失。

Legal Terms and Conditions

By using the evaluation board discussed herein (together with any tools, components documentation or support materials, the “Evaluation Board”), you are agreeing to be bound by the terms and conditions set forth below (“Agreement”) unless you have purchased the Evaluation Board, in which case the Analog Devices Standard Terms and Conditions of Sale shall govern. Do not use the Evaluation Board until you have read and agreed to the Agreement. Your use of the Evaluation Board shall signify your acceptance of the Agreement. This Agreement is made by and between you (“Customer”) and Analog Devices, Inc. (“ADI”), with its principal place of business at One Technology Way, Norwood, MA 02062, USA. Subject to the terms and conditions of the Agreement, ADI hereby grants to Customer a free, limited, personal, temporary, non-exclusive, non-sublicensable, non-transferable license to use the Evaluation Board FOR EVALUATION PURPOSES ONLY. Customer understands and agrees that the Evaluation Board is provided for the sole and exclusive purpose referenced above, and agrees not to use the Evaluation Board for any other purpose. Furthermore, the license granted is expressly made subject to the following additional limitations: Customer shall not (i) rent, lease, display, sell, transfer, assign, sublicense, or distribute the Evaluation Board; and (ii) permit any Third Party to access the Evaluation Board. As used herein, the term “Third Party” includes any entity other than ADI, Customer, their employees, affiliates and in-house consultants. The Evaluation Board is NOT sold to Customer; all rights not expressly granted herein, including ownership of the Evaluation Board, are reserved by ADI. CONFIDENTIALITY. This Agreement and the Evaluation Board shall all be considered the confidential and proprietary information of ADI. Customer may not disclose or transfer any portion of the Evaluation Board to any other party for any reason. Upon discontinuation of use of the Evaluation Board or termination of this Agreement, Customer agrees to promptly return the Evaluation Board to ADI. ADDITIONAL RESTRICTIONS. Customer may not disassemble, decompile or reverse engineer chips on the Evaluation Board. Customer shall inform ADI of any occurred damages or any modifications or alterations it makes to the Evaluation Board, including but not limited to soldering or any other activity that affects the material content of the Evaluation Board. Modifications to the Evaluation Board must comply with applicable laws, including but not limited to the RoHS Directive. TERMINATION. ADI may terminate this Agreement at any time upon giving written notice to Customer. Customer agrees to return to ADI the Evaluation Board at that time. LIMITATION OF LIABILITY. THE EVALUATION BOARD PROVIDED HEREUNDER IS PROVIDED “AS IS” AND ADI MAKES NO WARRANTIES OR REPRESENTATIONS OF ANY KIND WITH RESPECT TO IT. ADI SPECIFICALLY DISCLAIMS ANY REPRESENTATIONS, ENDORSEMENTS, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, RELATED TO THE EVALUATION BOARD INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, TITLE, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. IN NO EVENT WILL ADI AND ITS LICENSORS BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM CUSTOMER’S POSSESSION OR USE OF THE EVALUATION BOARD, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DELAY COSTS, LABOR COSTS OR LOSS OF GOODWILL. ADI’s TOTAL LIABILITY FROM ANY AND ALL CAUSES SHALL BE LIMITED TO THE AMOUNT OF ONE HUNDRED US DOLLARS ($100.00). EXPORT. Customer agrees that it will not directly or indirectly export the Evaluation Board to another country, and that it will comply with all applicable United States federal laws and regulations relating to exports. GOVERNING LAW. This Agreement shall be governed by and construed in accordance with the substantive laws of the Commonwealth of Massachusetts (excluding conflict of law rules). Any legal action regarding this Agreement will be heard in the state or federal courts having jurisdiction in Suffolk County, Massachusetts, and Customer hereby submits to the personal jurisdiction and venue of such courts. The United Nations Convention on Contracts for the International Sale of Goods shall not apply to this Agreement and is expressly disclaimed.