

## Evaluation Board for Active EMI Filters

The QPI-X-EVAL1 is an easy to use evaluation board for testing the QPI family of active EMI filters. The evaluation board includes a mounted QPI, capacitors, optional RY resistor and screw terminals for electrical connections.

When using the evaluation board, pay special attention to wiring and grounding. Wires should be kept as short as possible and positioned to minimize radiated pick up around the QPI. Refer to *Figure 1* below and the QPI-AN1 application note for the proper measurement set up.

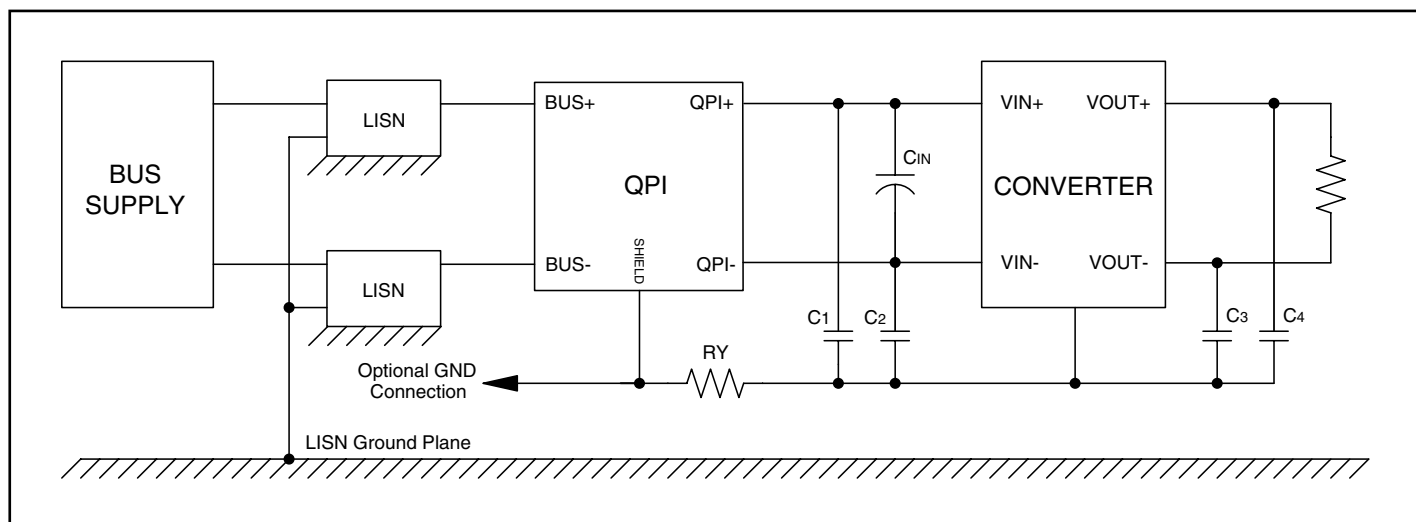
*Figure 2* shows the schematic of the QPI-X-EVAL1. Note that resistor RY is included with the evaluation board for use with non-resonant mode converters. To ensure the best results, make sure that the QPI shield connection is as close as possible to the common point of the bypass Y-capacitors and shield plane under the converters on the system board.

*Figure 3* shows the component locations on the EVAL board PCB.

Filter performance in the application is highly dependent on several factors and cannot be extrapolated from insertion loss curves alone. Final noise performance is a complex function of filter elements, equipment grounding and noise source impedances, which vary in magnitude and phase over the frequency spectrum of interest.

Designers should be aware that to select and qualify an EMI filter for conducted noise, they must test the filter in their product under the set up and conditions specified in the applicable EMI standards. Measurements should be made in consultation with in-house compliance testing or an independent EMI test facility.

Check [www.picorpower.com](http://www.picorpower.com) for data sheets, application notes and additional product information.



**Figure 1 - Spectrum Analyzer Test Setup for the evaluation board (QPI and Converter 5mm above LISN Ground Plane)**

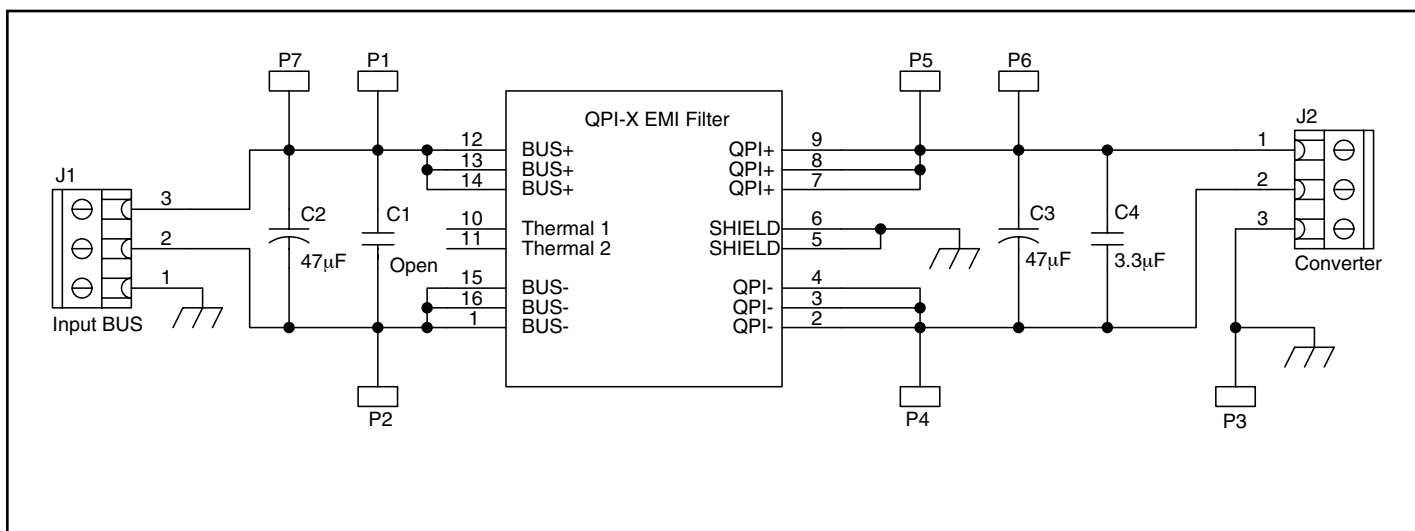


Figure 2 - QPI-X EVAL1 schematic.



Figure 3 - QPI-X EVAL board showing location of components and connectors.

## Ordering Information

Part Number	Description	Part Number	Description
QPI-1 EVAL1	Evaluation board for QPI-1L	QPI-4 EVAL1	Evaluation board for QPI-4L
QPI-2 EVAL1	Evaluation board for QPI-2L	QPI-5 EVAL1	Evaluation board for QPI-5L
QPI-3 EVAL1	Evaluation board for QPI-3L	QPI-6 EVAL1	Evaluation board for QPI-6L

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