# QPI Series

## ACTIVE EMI FILTER

### Features

- **Up to 60dB CM attenuation at 250kHz.**
- **Up to 80dB DM attenuation at 250kHz.**
- **Efficiency: >99% at full load.**
- **Surface-mount LGA package.**
- **Integrated hot-swap in selected models.**
- **Support PICMG 3.0 ATCA requirements.**

## Active EMI Filter (QPI)

### PRODUCT DESCRIPTION

The QPI family of active EMI filters provides conducted common-mode (CM) and differential-mode (DM) attenuation from 150kHz to 30MHz (CISPR22 range). The proprietary active filtering circuit provides superior attenuation at low frequencies intended to support EN Class B limits, including PICMG 3.0 for ATCA.

Models QPI-3 through QPI-8 are designed to work with most switch-mode power supplies. The QPI-9 through QPI-12 products are designed specifically for use with Vicor's V•I Chip power conversion products.

Full-size QPI models are 25x25x4.5mm SiP (System in Package), with LGA mounting. QPI-11 and QPI-12 are half size 12.5x25x4.5mm SiPs.
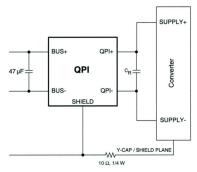
## Selection Tables

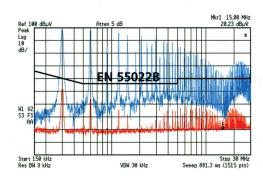| Part Number (Z = RoHS) | Input Voltage | Nominal Range | Current Rating | CM Attenuation @ 250 kHz | DM Attenuation @ 250 kHz | Hipot | Hot-Swap |
|---|---|---|---|---|---|---|---|
| QPI-3L(Z) | 24/28 Vdc | 10 – 40 Vdc | 7 A | 60 dB | 80 dB | 707 Vdc | N/A |
| QPI-4L(Z) | 48/60 Vdc | 30 – 80 Vdc | 7 A | 40 dB | 70 dB | 1,500 Vdc | N/A |
| QPI-5L(Z) | 24/28 Vdc | 10 – 40 Vdc | 14 A | 60 dB | 80 dB | 707 Vdc | N/A |
| QPI-6L(Z) | 48/60 Vdc | 30 – 80 Vdc | 14 A | 40 dB | 80 dB | 1,500 Vdc | N/A |
| QPI-7L(Z) | 24/28 Vdc | 18 – 38 Vdc | 6 A | 50 dB | 80 dB | 707 Vdc | Yes |
| QPI-8L(Z) | 48/60 Vdc | 32 – 76 Vdc | 6 A | 40 dB | 70 dB | 1,500 Vdc | Yes |
| **V•I Chip Specific Models** | | | | **@ 1 MHz** | **@ 1 MHz** | | |
| QPI-9L(Z) | 24/28 Vdc | 18 – 38 Vdc | 6 A | 65 dB | 80 dB | 707 Vdc | Yes |
| QPI-10L(Z) | 48/60 Vdc | 32 – 76 Vdc | 6 A | 45 dB | 70 dB | 1,500 Vdc | Yes |
| QPI-11L(Z) | 24/28 Vdc | 5 – 50 Vdc | 7 A* | 65 dB | 80 dB | 707 Vdc | N/A |
| QPI-12L(Z) | 48/60 Vdc | 10 – 80 Vdc | 7 A* | 45 dB | 70 dB | 1,500 Vdc | N/A |

\* Parallelable for up to 14 A.

## Typical Configuration Not for design use; see data sheet.



Models QPI-3 through QPI-8

## Performance



Conducted EMI scans showing QPI performance.
Blue trace = no QPI; Red trace = with QPI.

**powerbox**