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.

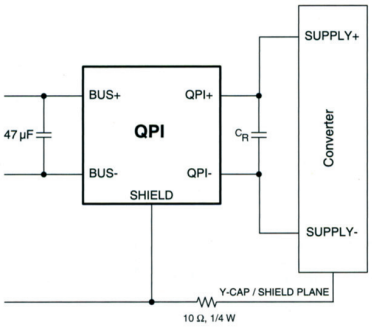
Selection Tables

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.

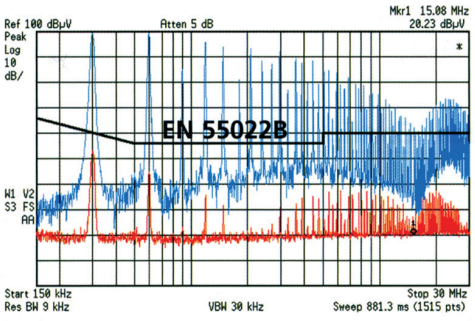
Typical Configuration

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.