BTCPower™

Broadband TelCom Power, Inc.

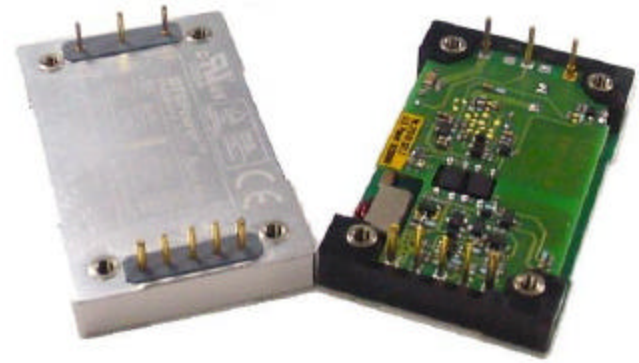
Redefining "Current" Limits In Power Conversion

SQO/SQ Series

25A High Efficiency Quarter Bricks

Description

The SQO/SQ series of high power density, high efficiency DC/DC converters deliver up to 25A in an industry standard quarter-bricks footprint. With a wide input voltage range of 36-75V they are available with an output voltage of either 1.5, 1.8, 2.5, 3.3 or 5 Volts. All models feature an input filter, input undervoltage lockout, output overvoltage and overtemperature protection, output current limiting and short circuit protection. These converters are available either in a package that is open-frame / enclosure construction. The aluminum heat spreader design achieves very efficient heat transfer with no hot spots. The use of highly derated power devices help to achieve high reliability, high performance and offer a low cost solution to systems designers that are challenged to maximize power and minimize board space.



Features

- Delivers up to 25A in Quarter Brick
- Low profile of only 0.35 inch
- 1.5V, 1.8V, 2.5V, 3.3V or 5V output modules
- -40°C to +85 °C ambient operation
- Meets Basic Insulation requirements of EN60950
- UL 60950 recognized and TUV EN60950
- Meets conducted limits of FCC Class B and CEI IEC61204-3 Class B with external filter

Applications

- Telecommunications
- Data Communications
- Wireless Communications
- Networking Gear
- Servers, Switches and Data Storage
- Semiconductor Test Equipment
- Distributed Power Architecture

Specification Summary

- 25A @ 5V, 25A @ 3.3V, 25A @ 2.5V, 25A @ 1.8V, 25A @ 1.5V
- Tightly output regulation, typical ±1%
- No minimum load required
- Ripple & Noise (20Mhz BW) 100 mv (pk-pk)
- Wide input operating range 36-75V
- On/Off pin and remote sense
- Output adjustment +/-10% range
- 1500V, 10M input-to-output isolation
- Enclosed construction with heat spreader for low temperature rise
- Output overcurrent and overvoltage protection
- Over Temperature protection
- Input Under voltage protection
- MTBF of 1,500,000 hours @ 50°C (Bellcore)

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Part Number and Selection Information

Model Part Number		Input				Output		Efficiency
		Voltage (Volts)		Current (A)		Voltage	Current	75% Load
Positive Logic	Negative Logic	Nominal	Range	No load	Full load	(Volts)	(Amps)	(%)
SQO100-24-5	**SQO100-24-5N**	24	18-36	0.04	5.8	5.0	25	90
SQO100-24-3.3	**SQO100-24-3.3N**	24	18-36	0.04	3.8	3.3	25	90
SQO100-24-2.5	**SQO100-24-2.5N**	24	18-36	0.04	3.0	2.5	25	89
SQO100-24-1.8	**SQO100-24-1.8N**	24	18-36	0.05	2.2	1.8	25	87
SQO100-24-1.5	**SQO100-24-1.5N**	24	18-36	0.05	1.8	1.5	25	87
SQO100-48-5	**SQO100-48-5N**	48	36-75	0.04	2.9	5.0	25	90
SQO100-48-3.3	**SQO100-48-3.3N**	48	36-75	0.04	1.9	3.3	25	90
SQO100-48-2.5	**SQO100-48-2.5N**	48	36-75	0.04	1.5	2.5	25	89
SQO100-48-1.8	**SQO100-48-1.8N**	48	36-75	0.05	1.1	1.8	25	87
SQO100-48-1.5	**SQO100-48-1.5N**	48	36-75	0.05	0.9	1.5	25	87

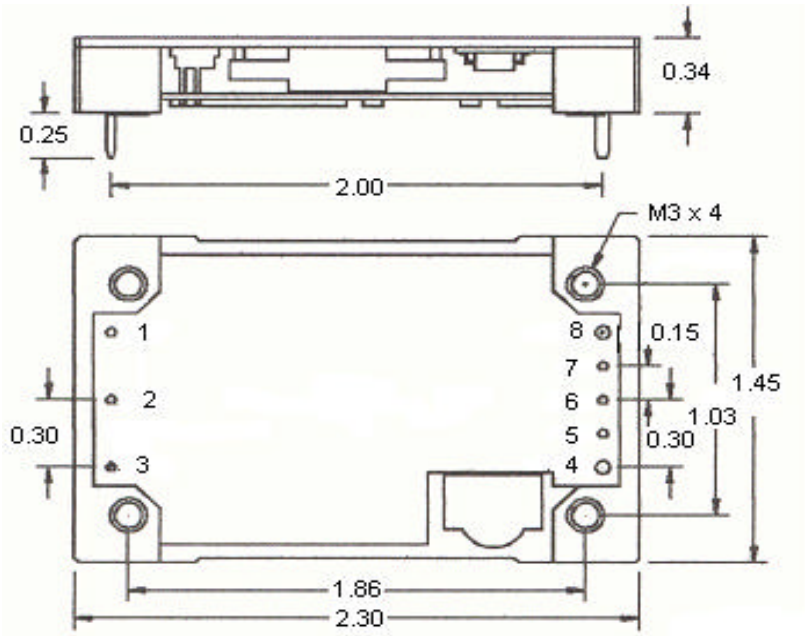
Typical at Ta= +25 °C under nominal line voltage and 75% load conditions, unless noted.
For encapsulated (epoxy enclosed) models, replace “SQO” in part no. with “SQ”.

Consult factory for other output voltage configurations and optional accessories such as heatsinks and filters.

Outline Information and Pin-out

Pin Connection	
Pin#	**Function**
1	Vin -
2	On/Off
3	Vin +
4	Vout +
5	Sense +
6	Trim
7	Sense -
8	Vout -

All dimensions are in inches [mm]
Pin 4 and 8 are dia. 0.062 [1.57]
All other pins are all dia. 0.040 [1.02]
Pin material: Brass
Pin finish: Tin/Lead plated
Heat spreader (baseplate) material: Aluminum
Weight: 50.7g (1.8oz)



The information and specifications contained in this brief are believed to be accurate and reliable at the time of publication. Specifications are subject to change without notice. Refer to product specification sheet for performance characteristics and application guidelines.