DELPHI SERIES

FEATURES

- High efficiency: 96% @ 12V/20A, 25A
  95.5% @ 10.8V/28A
- Standard footprint: 57.9x 36.8x 12.7mm
  (2.28"x1.45"x0.50")
- Industry standard pin out
- Fully protected: UVLO, OTP, OCP, OVP
- 2250V isolation
- Basic insulation
- No minimum load required
- ISO 9001, TL 9000, ISO 14001, QS 9000, OHSAS 18001 certified manufacturing facility
- UL/cUL 60950 (US & Canada), and TUV (EN60950) certified
- CE mark meets 73/23/EEC and 93/68/EEC directives

Delphi Series Q48SB, 300W Bus Converter DC/DC Power Modules: 48V in, 12V/25A out

The Delphi Series Q48SB, 48V input, single output, quarter brick, 300W bus converters are the latest offering from a world leader in power systems technology and manufacturing -- Delta Electronics, Inc. This product family supports intermediate bus architectures and powers multiple downstream non-isolated point-of-load (POL) converters. The Delphi Series Q48SB operates from a nominal 48V input and provides up to 300W of power or 28A of output current in an industry standard quarter brick footprint. The Q48SB product currently supports two input ranges: the Q48SB120 features an input voltage range of 42V to 53V and provides an unregulated output of 12V at 20A or 25A. The Q48SB108 features a wider input voltage range of 36V to 60V and provides an unregulated output of 10.8V at up to 28A. Typical efficiency for the 12V/25A module is 96%. With optimized component placement, creative design topology, and numerous patented technologies, the Q48SB bus converter delivers outstanding electrical and thermal performance. An optional heatsink is available for harsh thermal requirements.

OPTIONS

- Positive On/Off logic
- Short pin lengths
- Heatsink available for extended operation

APPLICATIONS

- Datacom / Networking
- Wireless Networks
- Optical Network Equipment
- Server and Data Storage
- Industrial/Testing Equipment

SPECIFICATIONS

GENERAL SPECIFICATIONS			OUTPUT SPECIFICATIONS		
Input Voltage		42~53V	**Voltage Accuracy**	Typical	3.5V
Switching Frequency	Typical	150KHz	**Line Regulation**	Typical (Q48SB12020)	2.4V
Isolation Voltage	In/Out	2250V		Typical (Q48SB12025)	2.7V
Isolation Capacitance	Typical (Q48SB12020)	500pF	**Load Regulation**	0%~100%	500mV
	Typical (Q48SB12025)	960pF	**Ripple & Noise**	20MHz BW Typical	90 mV (Q48SB12020)
Isolation Resistance	Minimum	10M ohm			100mV (Q48SB12025)
Size (Q48SB12020)	57.9x36.8x10.9mm	2.28"x1.45"x0.43"	**Current Limits**	Typical (Q48SB12020)	25A
(Q48SB12025)	57.9x36.8x12.7mm	2.28"x1.45"x0.50"		Typical (Q48SB12025)	30A

PART NUMBERING SYSTEM

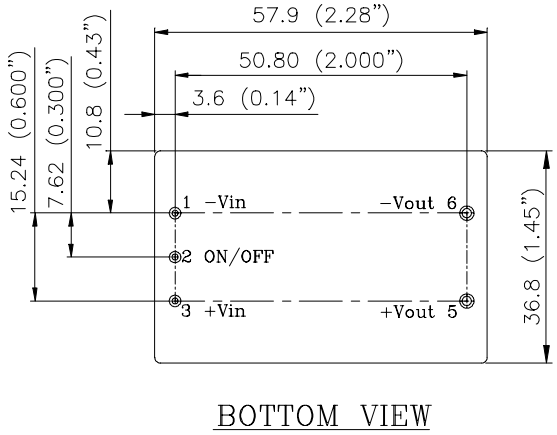
Q	48	S	B	120	20	N	R	F	A
Type of Product	**Input Voltage**	**Number of Outputs**	**Product Series**	**Output Voltage**	**Output Current**	**ON/OFF Logic**	**Pin Length**		**Option Code**
Q- Quarter Brick	48V	S- Single	B- Bus Converter	120- 12V 108- 9.6V	20- 20A 25- 25A 31- 31A	N- Negative P- Positive	R- 0.170" N- 0.145" K- 0.110"	F- RoHS 6/6 (Lead Free)	A- Standard Functions H- with heat spreader

MODEL LIST

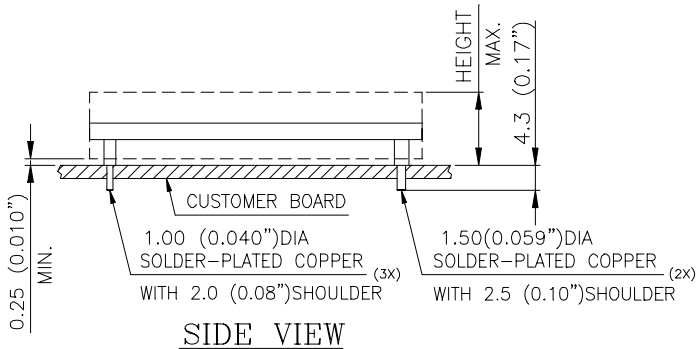
MODEL NAME	INPUT		OUTPUT		EFF @ 100% LOAD
Q48SB10828NRFA	36V~60V	6.3A	9.6V	31A	95.5%
Q48SB12020NRFA	42V~53V	5A	12V	20A	96.0%
Q48SB12025NRFA	42V~53V	6.25A	12V	25A	96.0%

Default remote on/off logic is negative and pin length is 0.170"
For different remote on/off logic and pin length, please refer to part numbering system above or contact your local sales

MECHANICAL DRAWING



BOTTOM VIEW



SIDE VIEW

MODULE	PACKAGE	HEIGHT MAX.
240W	W/O HEAT SPREADER	10.9 (0.43")
240W	WITH HEAT SPREADER	12.7 (0.50")
300W	W/O HEAT SPREADER	12.7 (0.50")
300W	WITH HEAT SPREADER	14.2 (0.56")

NOTES:
DIMENSIONS ARE IN MILLIMETERS AND (INCHES)
TOLERANCES: X.Xmm±0.5mm(X.XX in.±0.02 in.)
X.XXmm±0.25mm(X.XXX in.±0.010 in.)

CONTACT: www.delta.com.tw/dcdc

USA:
Telephone:
East Coast: (888) 335 8201
West Coast: (888) 335 8208
Fax: (978) 656 3964
Email: DCDC@delta-corp.com

Europe:
Telephone: +41 31 998 53 11
Fax: +41 31 998 53 53
Email: DCDC@delta-es.tw

Asia & the rest of world:
Telephone: +886 3 4526107 x 6220
Fax: +886 3 4513485
Email: DCDC@delta.com.tw

WARRANTY

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