

DELPHI SERIES



FEATURES

- High efficiency: 92.5% @ 3.3V/ 30A
- Size: 58.4mm x 22.8mm x 9.5mm (2.30"x0.90"x0.37")
- Industry standard pin out
- Fixed frequency operation
- Input UVLO, Output OTP, OCP, OVP
- Monotonic startup into normal and pre-biased loads
- 2250V Isolation
- Basic insulation
- No minimum load required
- SMD and through-hole versions
- No negative current during power or enable on/off
- ISO 9001, TL 9000, ISO 14001, QS 9000, OHSAS 18001 certified manufacturing facility
- UL/cUL 60950 (US & Canada) recognized, and TUV (EN60950) certified
- CE mark meets 73/23/EEC and 93/68/EEC directive

Delphi Series E48SH, 120W Eighth Brick Family DC/DC Power Modules: 48V in, 1.0V~15V out, 50A max

The Delphi Series E48SH Eighth Brick, 48V input, single output, isolated DC/DC converters are the latest offering from a world leader in power systems technology and manufacturing — Delta Electronics, Inc. This product family is available in either a through-hole or surface-mounted package and provides up to 120 watts of power or 50A of output current (1.2V and below) in an industry standard footprint and pinout. The E48SH converter operates from an input voltage of 36V to 75V and is available in output voltages from 1.0V to 15V. Efficiency is up to 93.5% (12V output). With creative design technology and optimization of component placement, these converters possess outstanding electrical and thermal performance, as well as extremely high reliability under highly stressful operating conditions. All models are fully protected from abnormal input/output voltage, current, and temperature conditions. The Delphi Series converters meet all safety requirements with basic insulation.

OPTIONS

- Positive On/Off logic
- Short pin lengths available
- External Synchronization
- Output OVP latch mode
- Heat spreader

APPLICATIONS

- Telecom/DataCom
- Wireless Networks
- Optical Network Equipment
- Server and Data Storage
- Industrial/Test Equipment

SPECIFICATIONS

GENERAL SPECIFICATIONS			OUTPUT SPECIFICATIONS		
Input Voltage		36~75V	Voltage Accuracy	Typical	±1%
Switching Frequency	Typical (3.3V)	250KHz	Line Regulation	Typical	±0.1%
Isolation Voltage	In/Out	2250V	Load Regulation	Typical	±0.1%
Isolation Capacitance	Typical	1500PF	Ripple & Noise	Typical (3.3)	30 mV
Isolation Resistance	Minimum	100MΩ	Current Limits	Typical	130%
MTBF	Bellcore (3.3V)	2M	Over Voltage	Typical	120%
OTP	Typical	115°C	Voltage Trim		+10%, -30%
Size	58.4x22.8x9.5mm	(2.30"x0.90"x0.37")			

PART NUMBERING SYSTEM

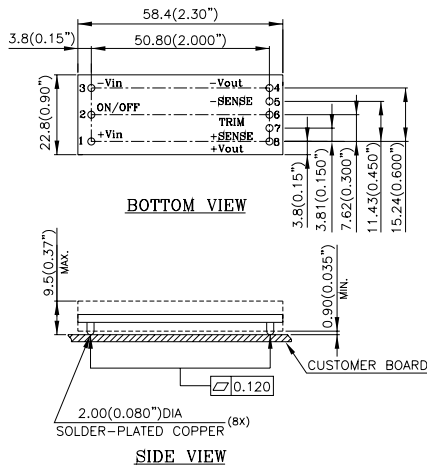
E	48	S	H	3R3	30	N	R	F	A
Type of Product	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length/Type		Option Code
E - Eighth Brick	48-36~75V	S - Single	H- 50A series	1R2 - 1.2V 1R5 - 1.5V 1R8 - 1.8V 2R5 - 2.5V 3R3 - 3.3V 050 - 5.0V 120 - 12V	10 - 10A 20 - 20A 30 - 30A 35 - 35A 40 - 40A 50 - 50A	N - Negative P - Positive	R - 0.170" N - 0.145" K - 0.110" M - SMD	F- RoHS 6/6 (Lead Free)	A - Standard functions B - Standard Functions, with output OCP (Available for 1.2V, 1.8V, and 2.5V) H - With heatspreader

MODEL LIST

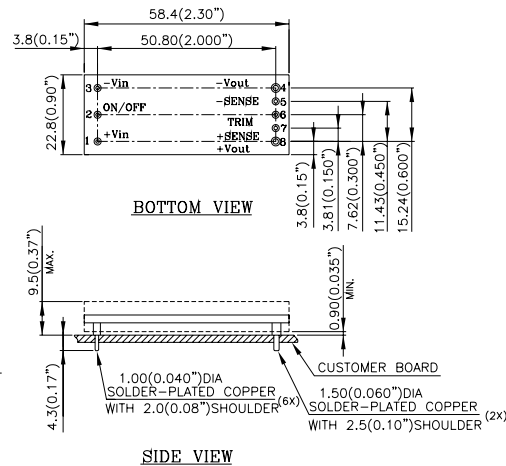
MODEL NAME	INPUT	OUTPUT	EFF @ 100% LOAD
E48SH1R250NRFA	36V~75V	2.3A	86.5%
E48SH1R540NRFA	36V~75V	2.3A	89%
E48SH1R840NRFA	36V~75V	2.7A	90%
E48SH2R535NRFA	36V~75V	2.9A	89.5%
E48SH3R330NRFA	36V~75V	3.6A	92%
E48SH05020NRFA	36V~75V	3.6A	90%
E48SH12010NRFA	36V~75V	4.3A	93.5%

MECHANICAL DRAWING

Surface-mount module



Through-hole module



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.)

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