

# DELPHI SERIES



## FEATURES

- ◆ High efficiency: 90.5% @ 3.3V/ 20A
- ◆ Size: 58.4mm x 22.9mm x 8.4mm (2.30"x0.90"x0.33")
- ◆ Industry standard pin out
- ◆ Fixed frequency operation
- ◆ Input UVLO, Output OTP, OCP, OVP
- ◆ 2250V isolation
- ◆ Basic insulation
- ◆ No minimum load required
- ◆ SMD and through-hole versions
- ◆ 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 directives

## Delphi Series E48SR, 66W Eighth Brick Family DC/DC Power Modules: 48V in, 1.2V~15V out

The Delphi Series E48SR Eighth Brick, 48V input, single output, isolated DC/DC converter is the latest offering from a world leader in power systems technology and manufacturing --Delta Electronics, Inc. This product family provides up to 66 watts of power or 25A of output current (1.8V and below) in an industry standard footprint. With creative design technology and optimization of component placement, these converters possess outstanding electrical and thermal performances, 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
- ◆ SMD pin

## 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	350KHz	Line Regulation	Typical	±0.1%
Isolation Voltage	In/Out	2250V	Load Regulation	Typical	±0.1%
Isolation Capacitance	Typical	1500PF	Ripple & Noise	Typical (1.8V)	40 mV
Isolation Resistance	Minimum	10MΩ	Current Limits	Typical	130%
MTBF	Bellcore (1.8V)	3M hrs	Over Voltage	Typical	120%
OTP	Typical	105°C	Voltage Trim		+10%, -10%
Size	(2.30"x0.90"x0.33")	58.4x22.9x8.4mm			

## PART NUMBERING SYSTEM

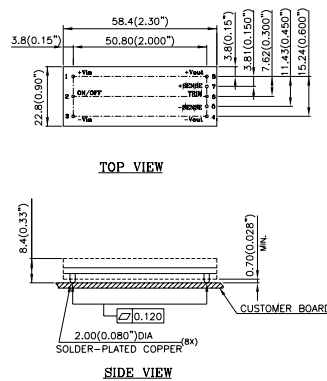
E	48	S	R	3R3	20	N	R	F	A
Type of Product	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length		Option Code
E - Eighth Brick	48- 36~75V	S - Single	R- Regular	1R2 - 1.2V 1R5 - 1.5V 1R8 - 1.8V 2R5 - 2.5V 3R3 - 3.3V 050 - 5.0V 120 - 12V 150 - 15V	04 - 4A 05 - 5A 07 - 7A 12 - 12A 20 - 20A 25 - 25A	N - Negative (Default) P - Positive	R - 0.170" (Default) N - 0.145" K - 0.110" M - SMD pin	F- RoHS 6/6 (Lead Free)	A - Standard Functions

## MODEL LIST

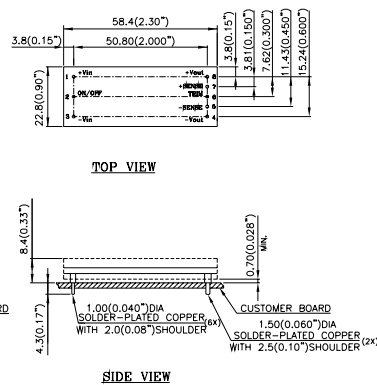
MODEL NAME	INPUT		OUTPUT		EFF @ 100% LOAD
E48SR1R225NRFA	36V~75V	1.3A	1.2V	25A	88.0%
E48SR1R525NRFA	36V~75V	1.5A	1.5V	25A	89.5%
E48SR1R825NRFA	36V~75V	1.8A	1.8V	25A	90.5%
E48SR2R520NRFA	36V~75V	1.9A	2.5V	20A	89.0%
E48SR3R320NRFA	36V~75V	2.5A	3.3V	20A	90.5%
E48SR05012NRFA	36V~75V	2.1A	5.0V	12A	91.5%
E48SR12005NRFA	36V~75V	2.2A	12V	5A	92.0%
E48SR12007NRFA	36V~75V	3.0A	12V	7A	93.0%
E48SR15004NRFA	36V~75V	2.2A	15V	4A	91.5%

## MECHANICAL DRAWINGS

### 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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## WARRANTY

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