

Product Features

- Delivers up to 30A
- Industry Standard 1/4 and 1/8 brick pin-out
- Low Profile of less than 0.42" / 10.4mm
- Parallelable Outputs (Droop Current Share)
- Monotonic startup into normal and pre-biased loads
- Remote Sense capability
- Full protection features (OVP, OCP, OTP and UVP)
- Full safety approvals: UL, cUL, TUV and CE Mark (LVD)



FEATURES	BENEFITS
DirectFET Mosfets	Best in class operational efficiencies and thermal management
Ultra-fast loop response	Minimum peak deviation and faster recovery times
40% less space than 1/4 Brick	Drop-In Replacement for larger 1/4 Brick applications
Integrated Bias Supply	Added functionalities in minimal space

KEY MARKET SEGMENTS & APPLICATIONS

- Distributed Power
- Switching Equipment
- Routers
- Networking
- ATE Test Equipment
- Wireless Communication
- RF Amplifiers

SPECIFICATIONS	30 Amp Single Output 1/8 Brick DC/DC Converters					
	EB3048E1	EB3048D1	EB3048C1	EB2548B1	EB2548A1	EB1548F1
Output Models	EB3048E1	EB3048D1	EB3048C1	EB2548B1	EB2548A1	EB1548F1
Nominal Output Voltage (V)	1.2	1.5	1.8	2.5	3.3	5.0
Maximum Output Current (A)	30	30	30	25	25	15
Maximum Output Power (W)	36	45	54	50	82.5	75
Efficiency (@ 48 VDC Input)	82%	83%	86%	87%	89%	89%
Input Voltage Range	36 to 75Vdc					
Input Current	2.40A (typical at 36Vin); 1.20A (typical at 75Vin)					
Input Reflected Ripple	25mA (rms)					
Output Voltage Setpoint	+/- 50mV (maximum)					
Output Trim Range	+/- 10% (minimum)					
Output Ripple / Noise	35mV (pk-pk) typical					
Remote Sense	+/- 10% maximum compensation					
Line / Load Regulation	+/- 5mV/10mV (typical)					
Transient Response	Max deviation 70mV; Recovery time < 100μs; 25% step load change 0.1A/μs					
Over Current Protection	Trip point range: 115 - 150%. Hiccup model - self resetting.					
Over Voltage Protection	Unit latches off between 120% to 135%. Recycle input or remote ON/OFF to restart					
Remote on / off Control	LOGIC 1 (TTL High) or open enables unit (ON); LOGIC 0 (TTL Low) or short shuts unit down (OFF)					
Operating Temperature	-40 to 85°C Ambient (refer to derating curve)					
Thermal Protection	Thermal shutdown at approximately 125°C. Auto Restart					
Cooling	Convection cooled / Forced Air (refer to derating curve)					
Dimensions	0.89" x 2.30" x 0.41" (22.8mm x 50.4mm x 10.4mm)					
Weight	15g					
International Safety Approvals	UL/cUL 60950, EN60950, CE Mark (LVD)					

Specifications listed assume 25°C Ambient Operating Temperature and Full Load Operation unless otherwise specified. This product is qualified for use in OEM equipment and is not appropriate for stand-alone operation. The information contained within this specification is believed to be true and correct at the time of publication, however, Cherokee International accepts no responsibility for consequences arising from printing errors or inaccuracies. The information and specifications contained herein are subject to change without notice.

PART NUMBER DEFINITION GUIDE

EB XX 48 XX X X XX -1B
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

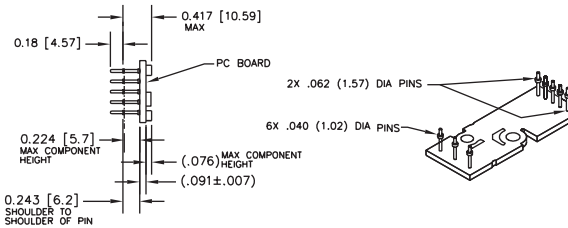
1. Eighth Brick
2. Output Current
15-30A
3. Input
4. Output
E1=1.2V
D1=1.5V
C1=1.8V
B1=2.5V
A1=3.3V
F1=5.0V
5. Remote on/off
Blank=Positive Logic
N=Negative Logic
6. Package Type
Blank=Thru-hole
S=SMT Package
7. RoHS
Blank=Non-compliant
Y=5 of 6 Compliant
Z=6 of 6 Compliant
8. Revision

Examples:

EB2548A1N-1A
3.3V / 25A Output, Thru Hole Package, Negative Logic

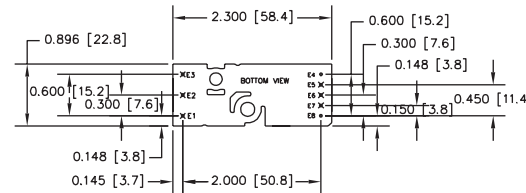
EB3048C1SZ-1A
1.8V / 30A Output, SMT Package, Positive Logic, 6 of 6 RoHS

OUTLINE DRAWING



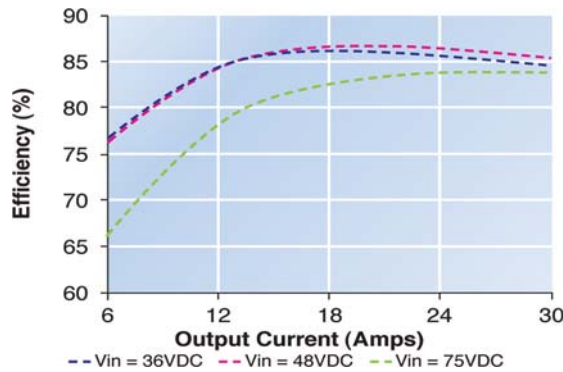
PIN CONNECTIONS

PIN NUMBER	FUNCTION
1	+ Input
2	On/Off
3	- Input
4	V Out (-)
5	- Sense
6	Trim
7	+ Sense
8	V Out (+)

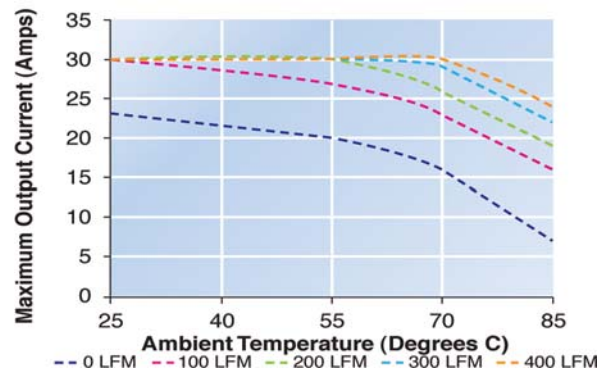


All Dimensions in Inches (mm)
 Tolerance: .XX = ± .02 in (.50 mm)
 .XXX = ± .010 in (.254 mm)

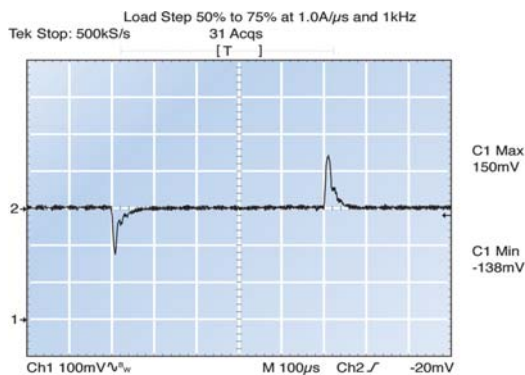
EFFICIENCY VS. OUTPUT CURRENT (EB3048C1)



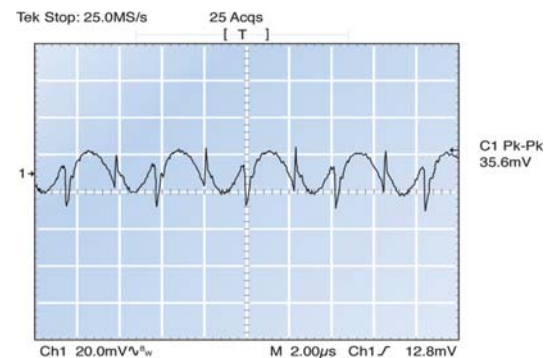
DERATING CURVES (EB3048C1)



TRANSIENT RESPONSE (EB3048C1)



OUTPUT RIPPLE & NOISE (EB3048C1)



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