



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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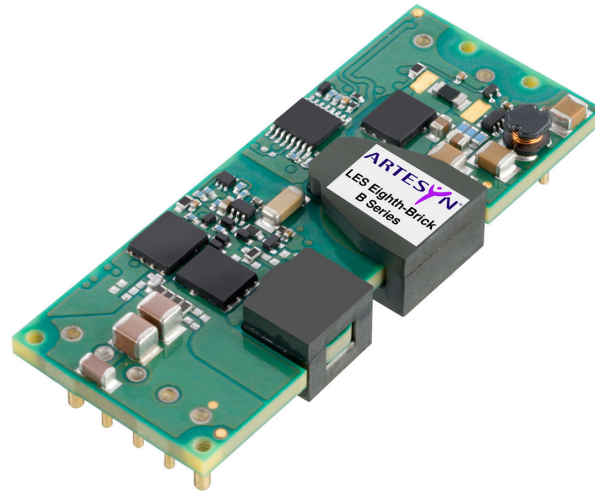
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Eighth-Brick B Series

Total Power: Up to 80 Watts
Input Voltage: 36-75 Vdc
No. of Outputs: Single



Special Features

- High efficiency topology
- Industry standard eighth-brick foot print (identical to quarter-brick pinout)
- Low profile through-hole and surface mount version
- 38% space savings over quarter-brick converters
- Wide ambient temperature range, -40 °C to +85 °C
- 90% to 110% output trim
- 100 V, 100 ms input voltage transient rated
- Meets basic insulation requirements of EN60950-1
- Industry standard feature sets: UVLO, OVP, OCP, OTP, O/P trim, remote sense
- Regulation to zero load
- Fixed frequency switching
- Fast transient switching
- EU directive 2002/95/EC compliant for RoHS

Safety

- UL/cUL60950-1 CAN/CSA 22.2
- TUV EN/IEC60950-1

Electrical Specifications*

Output		
Voltage adjustability:		90% to 110%
Minimum load:		0 A
Overshoot:	At turn-on and turn-off	None
Undershoot:	At turn-on and turn-off	None
Transient Response: (See Note 1)		5% Vout typ. deviation 40 μs recovery
Input		
Input voltage range:	48 V nominal	36-75 Vdc
Input current:	No load	100 mA
	Remote OFF	10 mA
Active high remote ON/OFF		
Logic compatibility:		TTL compatible ref to -input
ON		>2.4 Vdc
OFF		<0.8 Vdc
Undervoltage Lockout:	Power up	35.5 V (typ.)
	Power up	35.5 V (typ.)
Start-up time:	Power up	25 ms (typ.)
(See Note 2)	Remote ON/OFF	5 ms (typ.)

*All specifications are typical at nominal input, full load at 25 °C ambient unless otherwise stated.



Electrical Specifications

Notes

- 1 $di/dt = 1 \text{ A}/\mu\text{s}$, $V_{in} = 48 \text{ Vdc}$, $T_c = 25 \text{ }^\circ\text{C}$, load change = 50% to 75% I_o max. and 75% to 50% I_o max. Deviation varies by model. For further details see Technical Reference Notes (TRN).
- 2 Start-up into resistive load.
- 3 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 4 Recommended input fusing is up to 10 A HRC 200 V rated fuse.
- 5 Warranty: 2 years.
- 6 through-hole version intended for wave soldering process.
- 7 The 'J' suffix indicates that these parts are Pb-free (RoHS 6/6) compliant.

General		
Basic insulation:	Input/output	2250 V dc
Switching frequency:	Fixed	500 kHz
Approvals and standards:		EN60950-1 VDE UL/cUL60950-1
Material flammability:		UL94V-0
Weight:		20 g (0.70 oz)
MTBF:	Telcordia SR-332 Issue 1, 50% stress, 40 °C ambient	4.2 M hours

EMC Characteristics		
Immunity:		
ESD air enclosure:	EN1000-4-2 8 kV/6 kV	(O/P within spec.)
Radiated field enclosure:	EN1000-4-3 10 V/m	(O/P within spec.)
Conducted:	EN1000-4-6 10 V	(O/P within spec.)
Input transients:	100 V, 100 ms	

Environmental Characteristics		
Thermal performance:	Operating ambient temperature	-40 °C to +85 °C
	Non-operating	-40 °C to +125 °C

Protection		
Short-circuit:		115% with automatic recovery
Overvoltage:		125% V_o (typ) with automatic recovery
Thermal:		125 °C hot spot temperature with automatic recovery

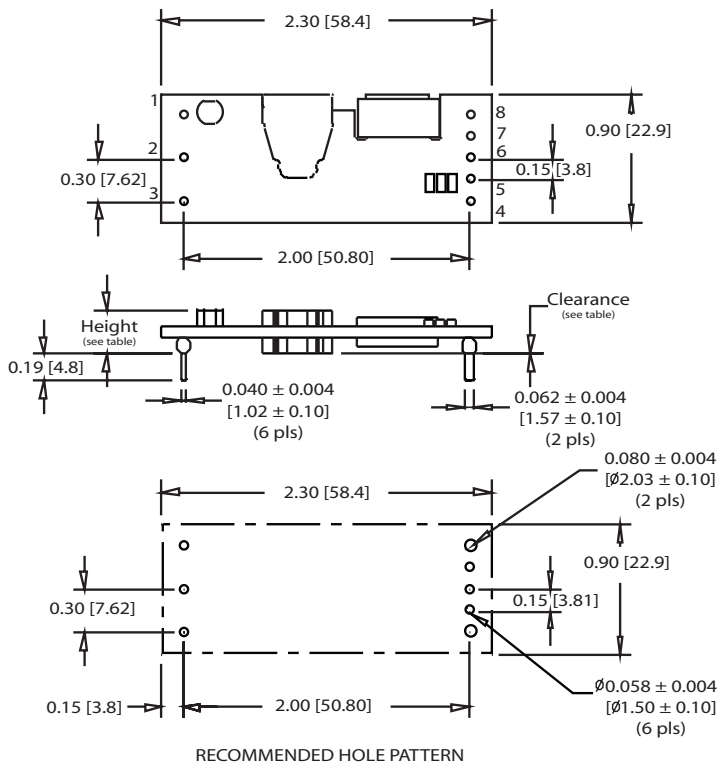
Ordering Information							
Output Voltage	Output Current (Max)	Efficiency (Typ)	Regulation			Ripple & Noise (Typ)	Model Number(7)
			Set Point Accuracy (Typ)	Line	Load		
12.0 V	6.7	92%	±1%	±0.1%	±0.2%	70 mVp-p	LES06B48-12V0REJ
5.0 V	13	92%	±1%	±0.1%	±0.2%	30 mVp-p	LES13B48-5V0REJ
3.3 V	20	91%	±1%	±0.1%	±0.2%	30 mVp-p	LES20B48-3V3REJ
2.5 V	22	90%	±1%	±0.1%	±0.2%	30 mVp-p	LES22B48-2V5REJ
1.8 V	25	89%	±1%	±0.1%	±0.2%	30 mVp-p	LES25B48-1V8REJ
1.5 V	25	88%	±1%	±0.1%	±0.2%	25 mVp-p	LES25B48-1V5REJ
1.2 V	25	86%	±1%	±0.1%	±0.2%	25 mVp-p	LES25B48-1V2REJ
1.0 V	25	85%	±1%	±0.1%	±0.2%	20 mVp-p	LES25B48-1V0REJ

Part Number System with Options

Product Family	Rated Output Current	Vintage	Nominal Rated Input Voltage	Type of Output	Remote ON/OFF LOGIC	Body Height, Package Type and Pin Length	RoHS Compliance (7)	
LES	22	B	48	-	2V5	R	E	J
L = Low Profile E = 1/8 Brick S = Single Output	22 = 22 Amps, 20 = 20 Amps, etc.	A = 1st generation B = 2nd generation	48 = 48 Volts (36 - 75 VDC range)	2V5 = 2.5 Volts 3V3 = 3.3 Volts	Blank = Positive R = Negative	A = 0.33 in (8.1 mm), Through Hole 0.19 in (4.8 mm), Pins E = 0.37 in (9.1 mm), Through Hole 0.19 in (4.8 mm), Pins S = 0.33 in (8.1 mm), Surface Mount	J = Pb free (RoHS 6/6 compliant)	

Through-hole Mechanical Drawing (for 1.8, 1.5, 1.2 and 1.0 V)

Rev. 11.25.08_138
Eighth-Brick B Series
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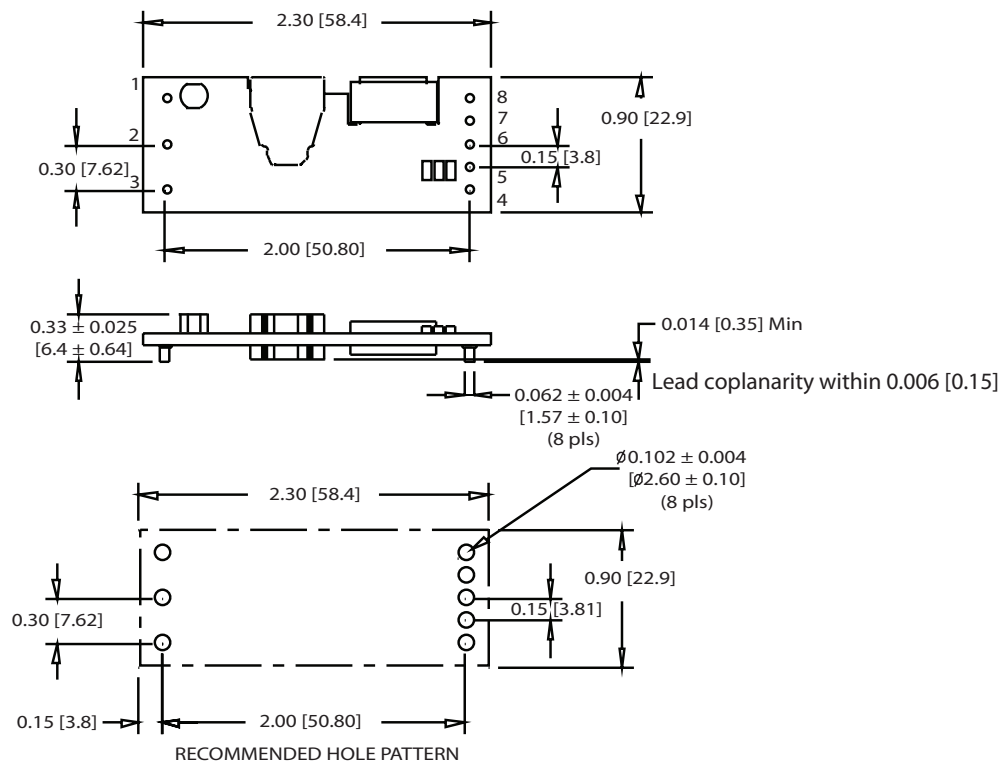
Suffix	Height	Clearance
	±0.025 [0.64]	Minimum
A	0.33 (8.4)	0.004 (0.10)
E	0.37 (9.4)	0.047 (1.20)

Pin Connections

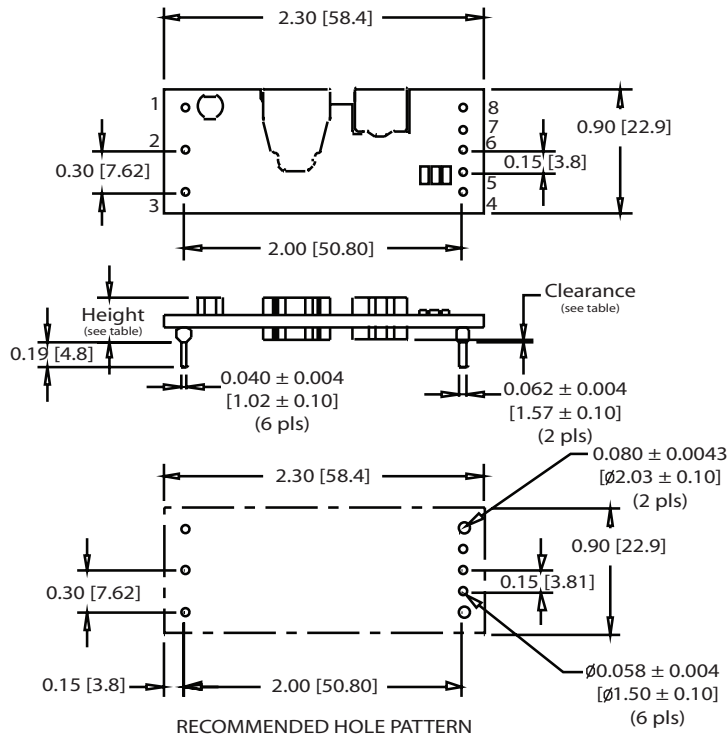
Pin number	Function
1	Vin+
2	ON/OFF
3	Vin-
4	Vout-
5	Sense-
6	Trim
7	Sense+
8	Vout+

Dimensions are in inches (millimeter)
Tolerances (unless otherwise specified)
X.XX±0.02 (X.X±0.5)
X.XXX±0.010 (X.XX±0.25)

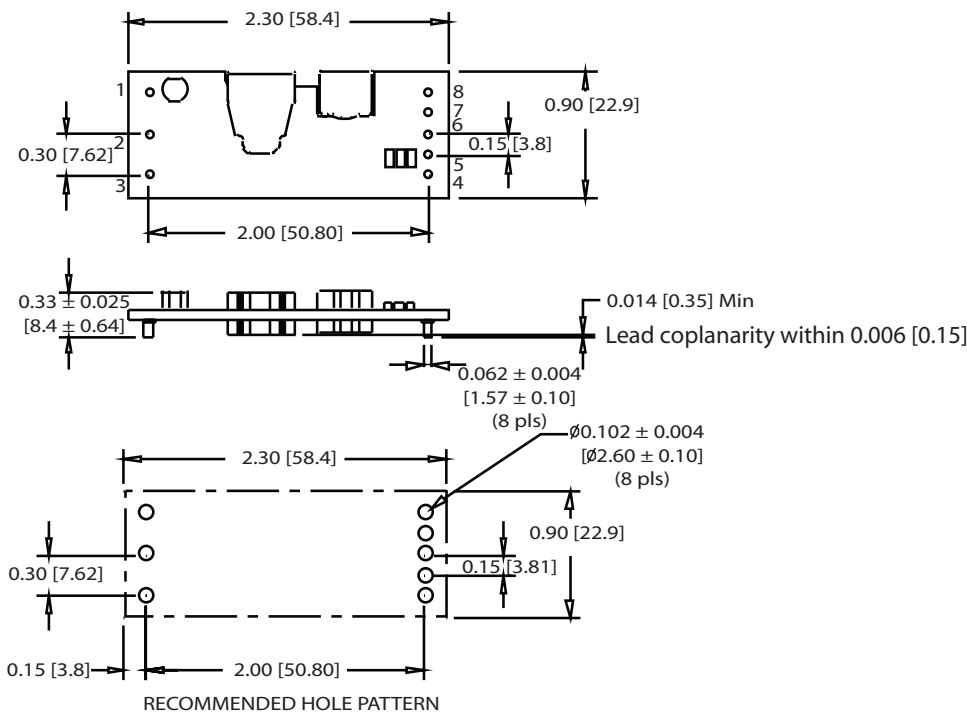
Surface-mount Mechanical Drawing (for 1.8, 1.5, 1.2 and 1.0 V)



Through-hole Mechanical Drawing (for 2.5, 3.3, 6 and 12 V)



Surface-mount Mechanical Drawing (for 2.5, 3.3, 6 and 12 V)



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