Rev.11.25.08_136 Eighth-Brick IBC Series

IBC Eighth-Brick Series 2nd Generation IBC

Total Power: 200 - 300W **Input Voltage:** 36 - 75Vdc

Special Features

- 48 V input with isolated 12 V output
- Ultra-high efficiency, 95.5% 12 V @ 25 A
- Unprecedented usable output power levels
- High power density (362 W/in³) open-frame technology
- Wide operating ambient temperature range
- Industry standard eighthbrick footprint and pinout
- Low profile, 0.40" (10.2 mm)
- Meets basic insulation requirements of EN60950-1
- Remote ON/OFF and overtemperature protection
- Available RoHS compliant
- 2 year warranty

Safety

- UL/cUL 60950-1, 1st Edition
- EN 60950-1 VDE



Electrical Specifications

Licetifical Specifications					
Output					
Output setpoint accuracy:		See table			
Line regulation:	Low line to high line	See table			
Load regulation:	Full load to min. load	See table			
Total error band	IBC25AET4812	9.70 - 13.40 Vdc			
(including setpoint, line,	IBC20AES4812	11.52 - 12.48 Vdc			
load and temperature):	IBC17AEW4812	11.40 - 12.60 Vdc			
Minimum load:		0 A			
Overshoot:	At turn on and turn-off	None			
Undershoot:		None			
Ripple and noise:	(See note 2)	60 mV pk-pk typ.			
5 - 20 MHz		20 mV rms typ.			
Input					
Input voltage range:		See table			
Input current:	Remote OFF	6 mA typ.			
Input current (max.):	(See note 1)	6.9 A max. @ lo max.			
		and Vin = min. rated			
Input reflected ripple:	IBC25AET4812	550 mA (pk-pk)			
(See note 4)	IBC20AES4812 IBC17AEW4812	230 mA (pk-pk) 230 mA (pk-pk)			
Remote ON/Off:	IBC17//LW4012	(see note 6)			
Logic compatiblity:	One	en collector ref. to- input			
On	Sp.	>2.4 Vdc			
OFF		<0.4 Vdc			
Undervoltage lockout:	Power-up	40 V			
IBC25AET4812:	Power-down	38 V			
IBC20AES4812:	Power up	35.2 V			
IBC17AEW4812:	Power down	34 V			
Startup time (see note 3):	Power-up	15 ms			
	Remote ON/OFF	5 ms			





ENG CL		
EMC Charateristics		
Immunity:		
ESD air enclosure:	EN61000-4-2 8 kV, 6 kV	(Air contact)
Input transients:	IBC25AET4812 IBC20AES4812 IBC17AEW4812	60 V. 100 ms 60 V. 100 ms 100 V. 100 ms
General Specifications		
Efficiency:		See table
Basic insulation:	Input/output	2250 Vdc
Switching frequency:	Fixed	600 kHz typ.
Approvals and standards (see note 5):		EN60950-1 VDE UL/cUL60950-1
Material flammability:		UL94V-0
Weight:		33 g (1.16 oz)
MTBF Representative model:	Telcordia Tech SR-332 48 Vin, 40 °C, 50% load ground benign	5,500,000 hours

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Environmental Specifications

Thermal performance	Operating ambient temperature : Non-operating	-40 °C to +85 °C -55 °C to +125 °C	
Protection			
Short-circuit		Hiccup	
Overvoltage	(See note 9)	Non-latching	
Thermal:		125 °C hot spot	

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

Ordering Information									
Output					(typical)				
Power (Max.)	Voltage	Voltage	Current (Min.)	(Max.)	(Typ.)	Set Point Accuracy %	Line %	Load %	Model Number
300 W	42 - 53 Vdc	12 V	0 A	25 A	95.5%		+10, -12.5%	±1.5%	IBC25AET4812J
240 W	42 - 53 Vdc	12 V	0 A	20 A	94.5%	±0.25%	±0.3%	-2/-1.5%	IBC20AES4812J
200 W	36 - 75 Vdc	12 V	0 A	17 A	94.0%	±0.25%	±1.0%	-3/+2%	IBC17AEW4812J

CAUTION: Hazardous internal voltages and high temperatures. Ensure that unit is not user accessible.

Part Number System with Options

Product Family	Rated Output Current	Form Factor	Input Voltage Type	Input Voltage	Output Voltage	Remote ON/ OFF Logic	Module Height	Pin Length Options	RoHS Compliance (7,8)
IBC	17A	E	W	48	12	- R	Α	N	J
IBC Intermediate Bus Converter 2nd Generation	17 A = 17 Amps etc.	E = Eighth- Brick Q = Quarter- brick S = Sixteenth- brick	T = Narrow Input Fixed Ratio S = Narrow Input Semi-reguated N = Narrow Telecom Fixed Ratio W = Wide Telecom Semi-reguated	48 = 48 V	12 = 12 V	Blank = Positive R = Negative (See Note 6)	A = Open-frame 0.40 in (10.2 mm) E = Open-rame, 0.45 in (11.4 mm)	Blank = 0.188 " (4.78 mm) N = 0.145 " (3.68 mm) K = 0.110 " (2.79 mm)	J = Pb-free (RoHS 6/6 compliant) Y = RoHS 5/6 compliant

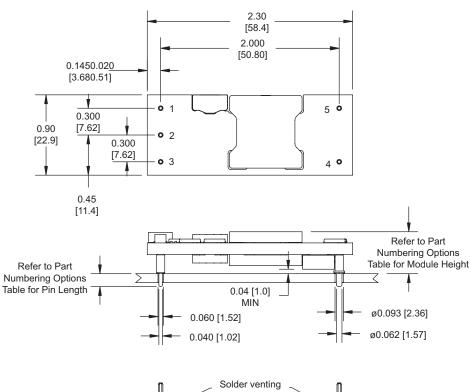
Notes

- Recommended input fusing is a 20 A HRC 250 V rated fuse.
- Measured with external filter. See Application Note 182 for details.
- Start-up into resistive load.
- Peak to peak measured without external Pi filter. Significant reduction possible with external filter. See Application Note 182 for details.
- This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- Active-low remote ON/OFF option is also available. Please add the suffix '-R'
- TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.

 NOTICE: Some models do not support all options. Please contact your local sales representative for details.

 NOTICE: Some models do not support all options. Please contact your local Sales representative or use the on-line model number search tool at http://www.powerconversion.com to find a suitable alternative.

Mechanical Drawing





Dimensions in Inches (mm) Folerances (unless otherwise specified) x.xx 0.02 (x.x 0.5)	Pin Connections				
	Pin Number	Function			
x.xxx 0.010 (x.xx 0.25)	1	+Vin			
	2	Remote ON/OFF			
	3	-Vin			
	4	-Vout			
	5	+Vout			

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