End of Life

Brick Package

IB0xxxxxxxxxxx-xx Family

IBC Modules

Description

The Vicor dynamic Sine Amplitude Converter™ (SAC™) topology is at the heart of each fixed-ratio Intermediate Bus Converter (IBC) module. Benefits realized from this patented technology are: superior efficiency, exceptional power density, very fast response to load transients, extremely low output impedance and a low electrical noise profile. These IBC modules are well suited to power system applications in enterprise and optical access networks.

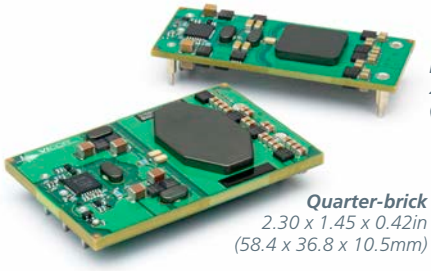
Offered from 300W to 850W, these IBCs conform to industry-standard eighth and quarter-brick footprints and feature input/output isolation and an array of protection functions. Their low-cross section profile facilitates unimpeded airflow — above and below the thin body — to minimize the temperature rise of downstream components.

Overview

- Isolated, fixed-ratio bus converters
- Best-in-class efficiency
- Best-in-class output power
- A superior drop-in replacement
- Industry standard form factors and pinouts
- IPC-9592 compliant

Features & Benefits

- Best-in-class performance
  - Quarter-Brick output to 80A / 850W
  - Eighth-Brick output to 48A / 500W
  - Eighth-Brick & Quarter-Brick density >600W/in^3
  - Peak efficiency to >98%
  - Low noise ZVC / ZCS topology
- Industry standard packages
  - Eighth-Brick & Quarter-Brick formats
  - Multiple I/O pin lengths
  - Baseplate option for Quarter-Brick model
  - Low profile (0.42in)
- Flexible electrical characteristics
  - Input range: 36 – 60V_{DC} (48V nom.)
  - 75V surge capability
  - 9.6V_{DC} (nom.) output (5:1 transfer ratio) or 12.0V_{DC} (nom.) output (4:1 transfer ratio)
  - Positive or negative logic enable
  - 2,250V_{DC} Iisolation
  - –40°C operation



Eighth-brick
2.30 x 0.90 x 0.385in
(58.4 x 22.9 x 9.53mm)

Quarter-brick
2.30 x 1.45 x 0.42in
(58.4 x 36.8 x 10.5mm)

Part Number	Package	Power
9.6V_{DC} Output (5:1)		
IB048E096T40xx-xx[a]	Eighth Brick	300
IB050E096T40xx-xx[b]		
IB054E096T40xx-xx[c]		
IB048E096T48xx-xx[a]	Eighth Brick	500
IB050E096T48xx-xx[b]		
IB054E096T48xx-xx[c]		
IB048Q096T64xx-xx[a]	Quarter Brick	650
IB050Q096T64xx-xx[b]		
IB054Q096T64xx-xx[c]		
IB048Q096T70xx-xx[a]	Quarter Brick	750
IB050Q096T70xx-xx[b]		
IB054Q096T70xx-xx[c]		
IB048Q096T80xx-xx[a]	Quarter Brick	850
IB050Q096T80xx-xx[b]		
IB054Q096T80xx-xx[c]		

Part Number	Package	Power
12.0V_{DC} Output (4:1)		
IB048E120T32xx-xx[a]	Eighth Brick	300
IB050E120T32xx-xx[b]		
IB054E120T32xx-xx[c]		
IB048E120T40xx-xx[a]	Eighth Brick	500
IB050E120T40xx-xx[b]		
IB054E120T40xx-xx[c]		
IB048Q120T53xx-xx[a]	Quarter Brick	650
IB050Q120T53xx-xx[b]		
IB054Q120T53xx-xx[c]		
IB048Q120T60xx-xx[a]	Quarter Brick	750
IB050Q120T60xx-xx[b]		
IB054Q120T60xx-xx[c]		

[a] 38 – 55V_{IN}, 1,500V_{DC} isolation
[b] 36 – 60V_{IN}, 2,250V_{DC} isolation
[c] 36 – 60V_{IN}, 2,250V_{DC} isolation with 75V transient ride-through
Replace the "–xx" suffix in the part number with "–CB" to order an evaluation board.

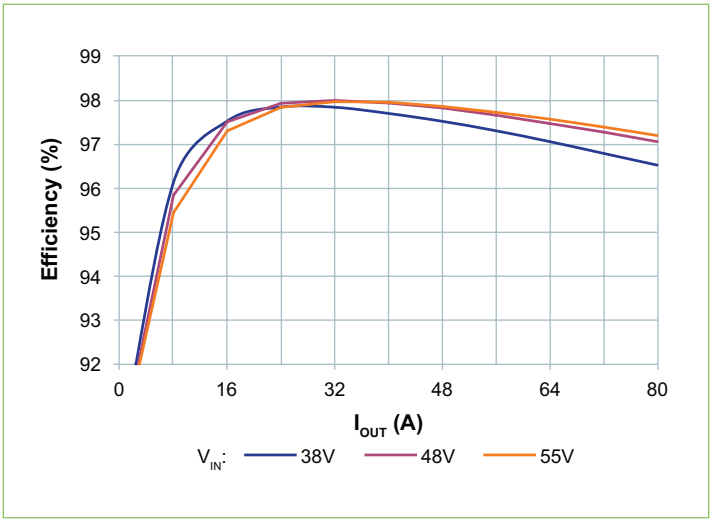


Figure 1 – *Efficiency vs. output current for IB050Q096T80N1-00*

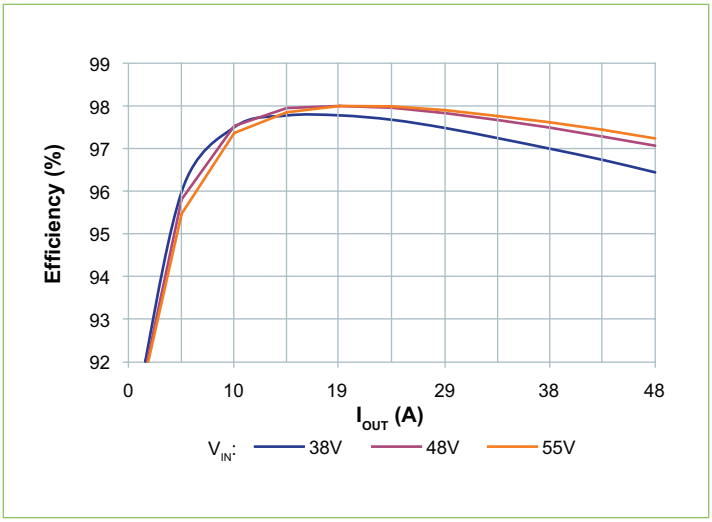


Figure 2 – *Efficiency vs. output current for IB050E096T48N1-00*

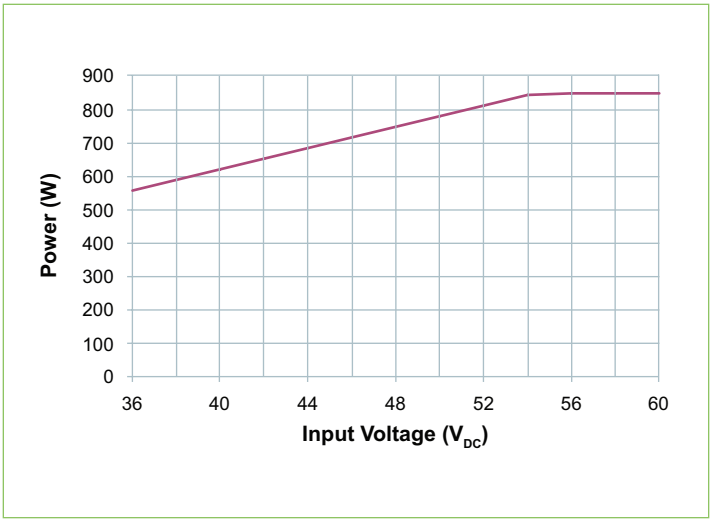


Figure 3 – *IB050Q096T80N1-00 output power vs. input voltage*

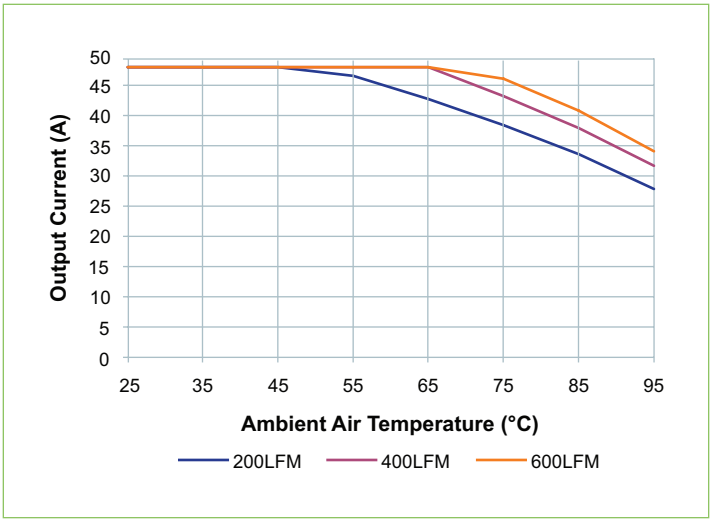


Figure 4 – *IB050E096T48N1-00 output curent de-rating vs. ambient temperature*

Note: This document is a product overview, for detailed information such as input range, enable logic and pin length options, go to:
http://www.vicorpower.com/dc-dc-converters-board-mount/vi-brick-intermediate-bus-conver