

Brick Package

IB0xxxxxxxxxx-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.

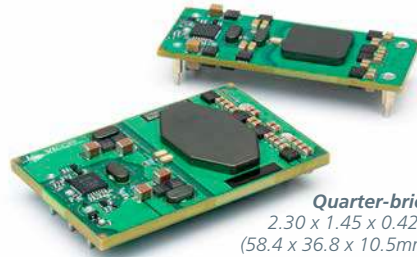
Offered from 300W to 850W, these IBCs conform to industry-standard eighth and quarter-brick footprints and feature input/output isolation and an array of protection functions. Their low-cross section profile facilitates unimpeded airflow — above and below the thin body — to minimize the temperature rise 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/in³
 - 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} isolation
 - –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	Part Number	Package	Power
9.6V_{DC} Output (5:1)			12.0V_{DC} Output (4:1)		
IB048E096T40xx-xx ^[a]	Eighth Brick	300	IB048E120T32xx-xx ^[a]	Eighth Brick	300
IB050E096T40xx-xx ^[b]			IB050E120T32xx-xx ^[b]		
IB054E096T40xx-xx ^[c]			IB054E120T32xx-xx ^[c]		
IB048E096T48xx-xx ^[a]	Eighth Brick	500	IB048E120T40xx-xx ^[a]	Eighth Brick	500
IB050E096T48xx-xx ^[b]			IB050E120T40xx-xx ^[b]		
IB054E096T48xx-xx ^[c]			IB054E120T40xx-xx ^[c]		
IB048Q096T64xx-xx ^[a]	Quarter Brick	650	IB048Q120T53xx-xx ^[a]	Quarter Brick	650
IB050Q096T64xx-xx ^[b]			IB050Q120T53xx-xx ^[b]		
IB054Q096T64xx-xx ^[c]			IB054Q120T53xx-xx ^[c]		
IB048Q096T70xx-xx ^[a]	Quarter Brick	750	IB048Q120T60xx-xx ^[a]	Quarter Brick	750
IB050Q096T70xx-xx ^[b]			IB050Q120T60xx-xx ^[b]		
IB054Q096T70xx-xx ^[c]			IB054Q120T60xx-xx ^[c]		
IB048Q096T80xx-xx ^[a]	Quarter Brick	850	^[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.		
IB050Q096T80xx-xx ^[b]					
IB054Q096T80xx-xx ^[c]					

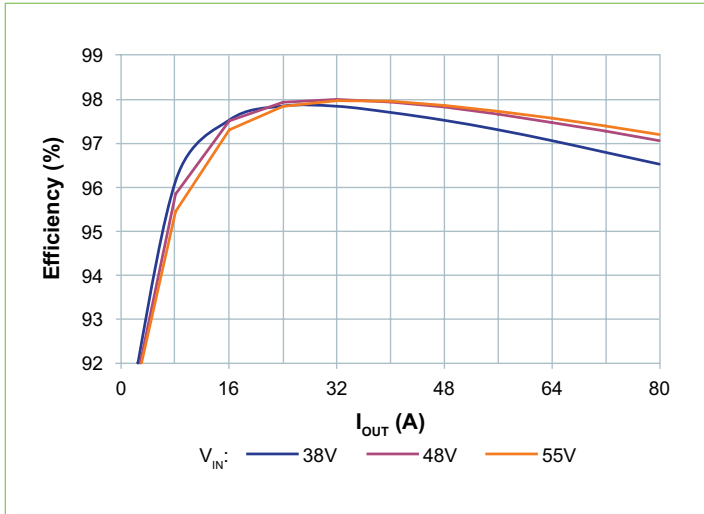


Figure 1 – Efficiency vs. output current for IB050Q096T80N1-00

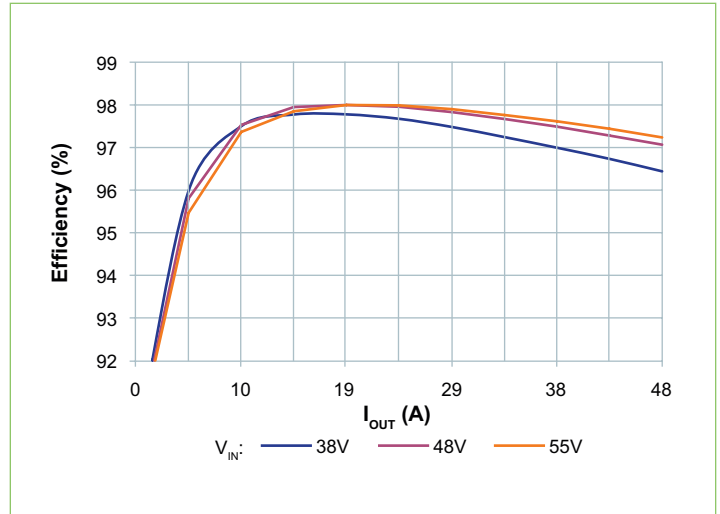


Figure 2 – Efficiency vs. output current for IB050E096T48N1-00

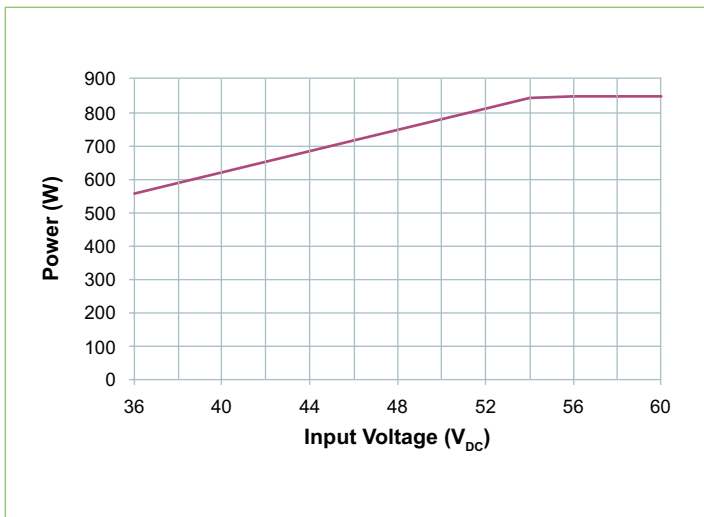


Figure 3 – IB050Q096T80N1-00 output power vs. input voltage

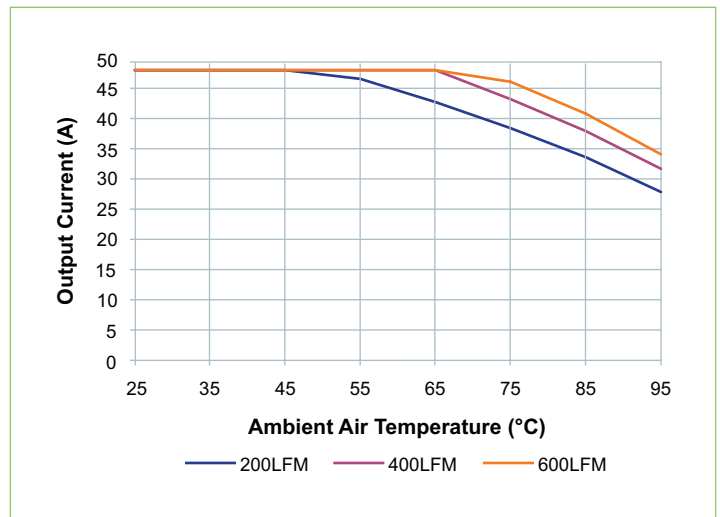


Figure 4 – IB050E096T48N1-00 output current de-rating vs. ambient temperature

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>