

VI Brick® IBC Modules

IB0xxxxxxxxxx-xx Family

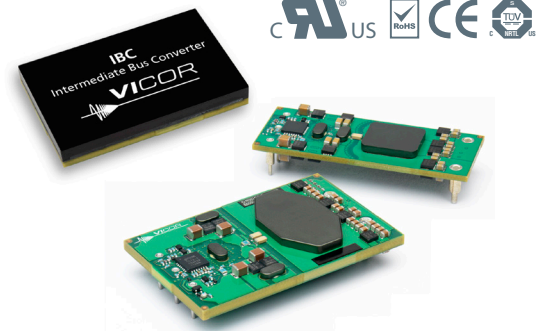
BRICK

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

- **Best-in-Class Performance**
 - Quarter-Brick Output to 80 A / 850 W
 - Eighth-Brick Output to 48 A / 500 W
 - Eighth-Brick & Quarter-Brick Density >600 W/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 (0.42")
- **Flexible Electrical Characteristics**
 - Input Range: 36 to 60 Vdc (48 V nom.)
 - 75 V Surge Capability
 - 9.6 Vdc (nom.) Output (5:1 transfer ratio) or 12.0 Vdc (nom.) Output (4:1 transfer ratio)
 - Positive or Negative Logic Enable
 - 2,250 Vdc Isolation
 - 40°C Operation



Description

Vicor's 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 300 W to 850 W, 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.

Part Number	Package	Power	Part Number	Package	Power
9.6 Vdc Output (5:1)			12.0 Vdc Output (4:1)		
IB048E096T40xx-xx ^[a]	Eighth Brick	300 W	IB048E120T32xx-xx ^[a]	Eighth Brick	300 W
IB050E096T40xx-xx ^[b]	Eighth Brick	300 W	IB050E120T32xx-xx ^[b]	Eighth Brick	300 W
IB054E096T40xx-xx ^[c]	Eighth Brick	300 W	IB054E120T32xx-xx ^[c]	Eighth Brick	300 W
IB048E096T48xx-xx ^[a]	Eighth Brick	500 W	IB048E120T40xx-xx ^[a]	Eighth Brick	500 W
IB050E096T48xx-xx ^[b]	Eighth Brick	500 W	IB050E120T40xx-xx ^[b]	Eighth Brick	500 W
IB054E096T48xx-xx ^[c]	Eighth Brick	500 W	IB054E120T40xx-xx ^[c]	Eighth Brick	500 W
IB048Q096T64xx-xx ^[a]	Quarter Brick	650 W	IB048Q120T53xx-xx ^[a]	Quarter Brick	650 W
IB050Q096T64xx-xx ^[b]	Quarter Brick	650 W	IB050Q120T53xx-xx ^[b]	Quarter Brick	650 W
IB054Q096T64xx-xx ^[c]	Quarter Brick	650 W	IB054Q120T53xx-xx ^[c]	Quarter Brick	650 W
IB048Q096T70xx-xx ^[a]	Quarter Brick	750 W	IB048Q120T60xx-xx ^[a]	Quarter Brick	750 W
IB050Q096T70xx-xx ^[b]	Quarter Brick	750 W	IB050Q120T60xx-xx ^[b]	Quarter Brick	750 W
IB054Q096T70xx-xx ^[c]	Quarter Brick	750 W	IB054Q120T60xx-xx ^[c]	Quarter Brick	750 W
IB048Q096T80xx-xx ^[a]	Quarter Brick	850 W			
IB050Q096T80xx-xx ^[b]	Quarter Brick	850 W			
IB054Q096T80xx-xx ^[c]	Quarter Brick	850 W			

^[a] 38 – 55 Vin, 1,500 Vdc isolation
^[b] 36 – 60 Vin, 2,250 Vdc isolation
^[c] 36 – 60 Vin, 2,250 Vdc isolation with 75 V transient ride-through

Replace the “-xx” suffix in the part number with “-CB” to order an evaluation board.

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>

Performance

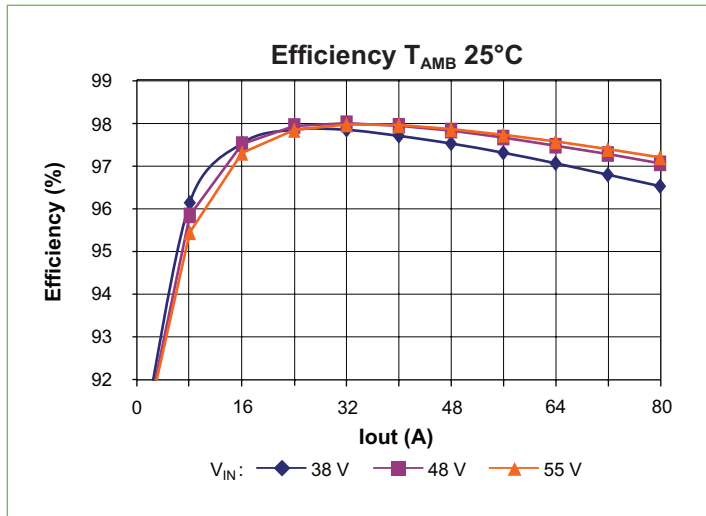


Figure 1 – Efficiency vs. Output Current for IB050Q096T80N1-00

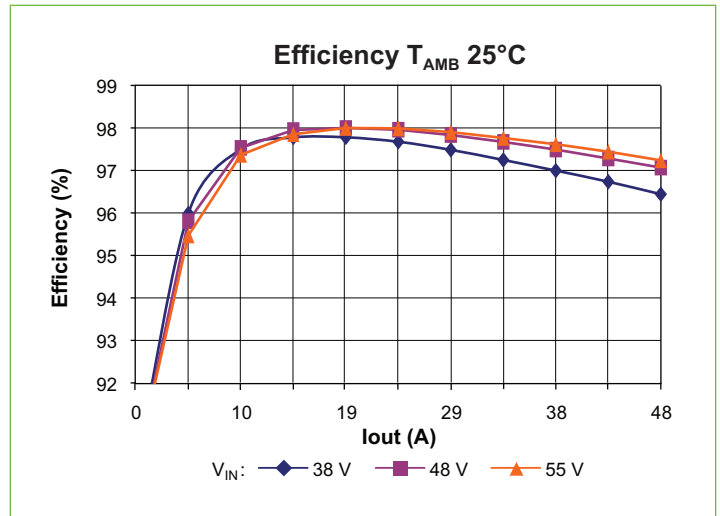


Figure 2 – Efficiency vs. Output Current for IB050E096T48N1-00

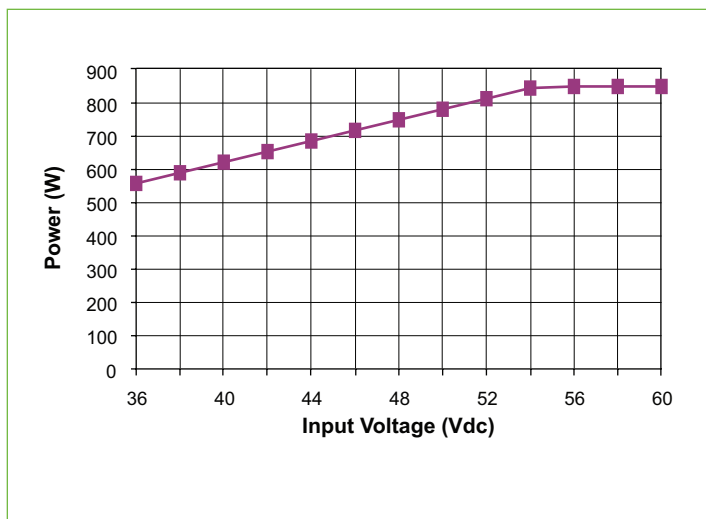


Figure 3 – IB050Q096T80N1-00 Output Power vs. Input Voltage

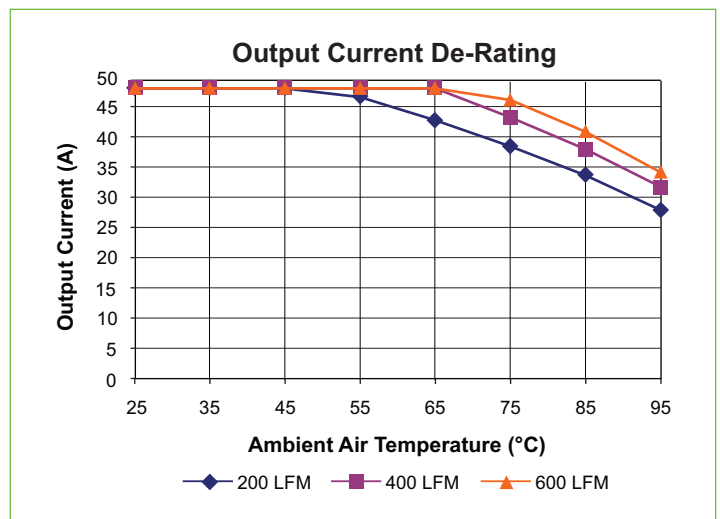


Figure 4 – IB050E096T48N1-00 Output Current De-rating vs. Ambient Temperature

Product Dimensions

