VI Chip® BCM®
Bus Converter Family

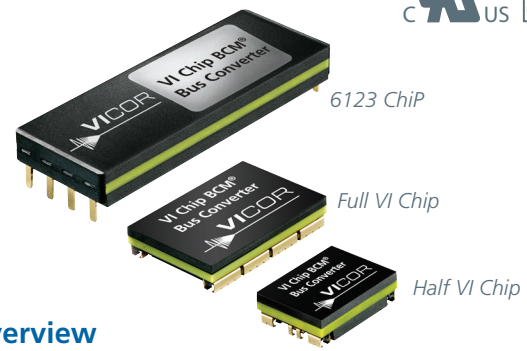
VICHIP

Description

VI Chip Bus Converter Modules (BCMs) provide an isolated unregulated bus voltage to power Point-of-Load (PoL) converters. The BCMs provide a fixed ratio conversion from either a high input voltage (ranging from 230 – 410 V depending on the model) or a 48 V (38 – 55 V) input voltage to a broad range of output bus voltages. With peak efficiencies of up to 97.9% and power densities of up to 1,880 W/in^3, VI Chip BCMs offer the most efficient and highest density, isolated power conversion available.

Utilizing Vicor's resonant Sine Amplitude Converter (SAC) topology, BCMs leverage high frequency Zero-Voltage Switching (ZVS) and Zero-Current Switching (ZCS) to deliver unmatched efficiency and power density with low noise and fast transient response.
In addition, the BCM's low AC impedance, beyond the bandwidth of most downstream regulators, enables bulk capacitance, normally located at the input of a regulator, to be placed at the high voltage input to the BCM. This reduces the bulk capacitance requirement and offers savings of board area and system cost.

Offered in VI Chip full and half-sized packages, as well as the new 6123 ChiP package, BCMs deliver a range of power, size and efficiency to exceed most customer needs.



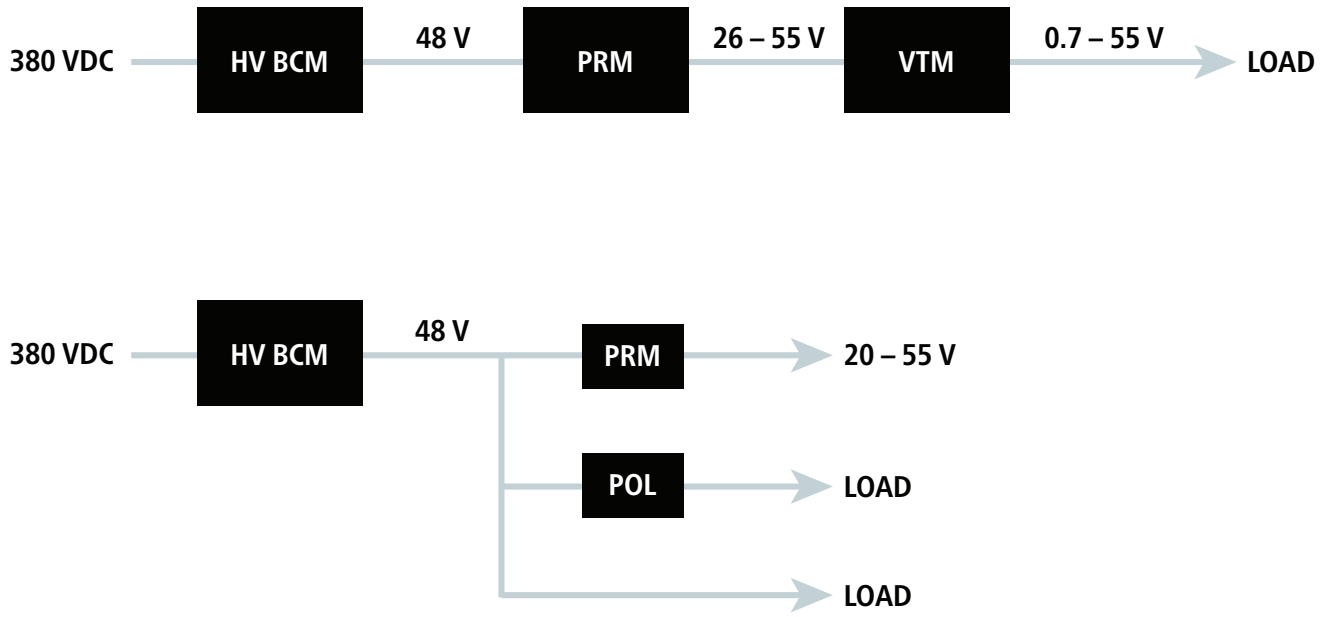
Overview

- **High Power Density:** Up to 1,880 W/in^3 in a 2.2 in^2 footprint
- **Output Power**
  6123: Up to 1.2 kW
  Full, Half: Up to 325 W
- **High Efficiency**
  6123: 97.9%
  Full, Half: 96%
- **Isolation**
  Up to 4242 Vdc
- **Fast Response Time**
- **Low Noise**
- **Protection Features:**
  Undervoltage and overvoltage lockout, overcurrent protection, short circuit protection, over temperature protection

Model Number	Input Voltage (V)	Output Voltage (V)	Output Power (W)	Output Current (A)	Package Type
BCM380P475C1K2A30	**260 – 410**	**32.5 – 51.25**	**1,200**	**25.7**	**6123**
B384F120T30	360 – 400	11.25 – 12.5	300	25.0	Full
BCM352F110T300A00	330 – 365	10.3 – 11.4	300	28.0	Full
BCM352F125T300A00	330 – 365	11.79 – 13.04	300	26.0	Full
BCM352F440T330A00	330 – 365	41.25 – 45.63	325	7.7	Full
BCM384F480T325A00	360 – 400	45.0 – 50.0	325	7.0	Full
MBCM270F338M235A00	240 – 330	30.0 – 41.25	235	7.3	Full
MBCM270F450M270A00	230 – 330	38.3 – 55.0	270	6.25	Full
B048F015T14	38 – 55	1.19 – 1.71	135	90	Full
B048F030T21	38 – 55	2.38 – 3.43	210	70	Full
B048F040T20	38 – 55	3.17 – 4.58	200	50	Full
B048F060T24	38 – 55	4.75 – 6.87	240	40	Full
B048F080T24	38 – 55	6.33 – 9.16	240	30	Full
B048F096T24	38 – 55	7.60 – 11.0	240	25	Full
B048F120T30	38 – 55	9.50 – 13.8	300	25	Full
B048F160T24	38 – 55	12.7 – 18.3	240	15	Full
B048F240T30	38 – 53	19.0 – 26.5	300	12	Full
B048F320T30	38 – 55	25.3 – 36.7	300	9	Full
B048F480T30	38 – 55	38.0 – 55.0	300	6	Full
BCM48BH120T120A00	38 – 55	9.5 – 13.75	120	11.3	Half

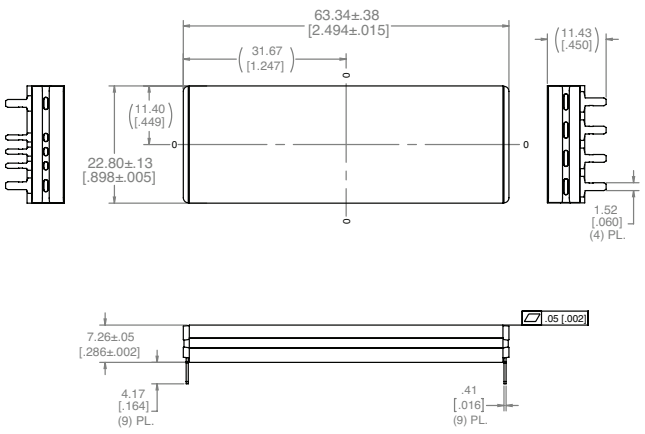
Thermally enhanced packaging technologies available at vicorpower.com

Typical Applications

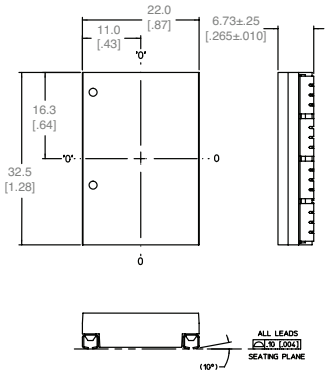


Outline Drawings

6123 ChiP



Full VI Chip



Half VI Chip

