

## MIL-COTS

# High Voltage BCM<sup>®</sup> Bus Converter Module

Isolated, Fixed Ratio Bus Converter Family



For use in a broad range of defense-based IBA power systems that can run from 270V<sub>DC</sub> MIL input voltage. Applications include airborne power, high density defense/aerospace power systems and defense/aerospace communications systems.

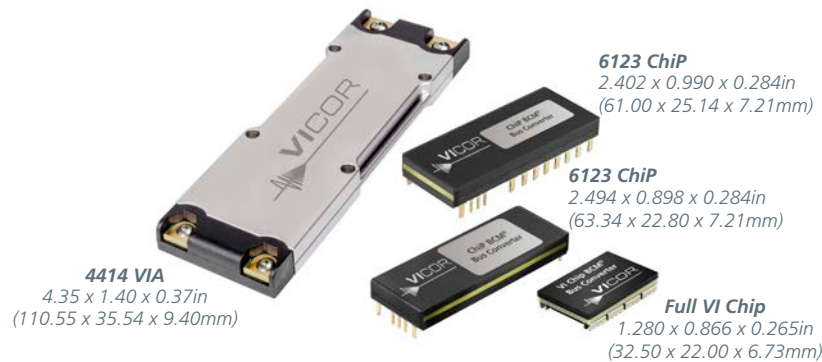
## Description

The Vicor family of High Voltage BCMs are high efficiency and high-power density bus converters which provide an isolated intermediate bus voltage to power non-isolated point-of-load converters. Using the Vicor unique Sine Amplitude Converter™ topology with fixed high switching frequency and zero voltage and zero current soft switching, the MIL-COTS BCMs offer direct ratio-metric conversion from a 270V<sub>NOM</sub> input to a range of DC outputs. With millions of hours of operation in the field, the BCM has a demonstrated ability to exceed the stringent reliability requirements needed in defense-based applications. High Voltage MIL-COTS BCM products provide power system engineers superior performance with benchmark efficiency and power density and eliminates constraints of size and height in a design with smaller, lighter and low profile packages.

These products are available in multiple package options including surface-mount and through-hole VI Chips, through-hole ChiPs and chassis or PCB mount VIAs that provides design flexibility and enables multiplicity of thermal design strategies.

## Features & Benefits

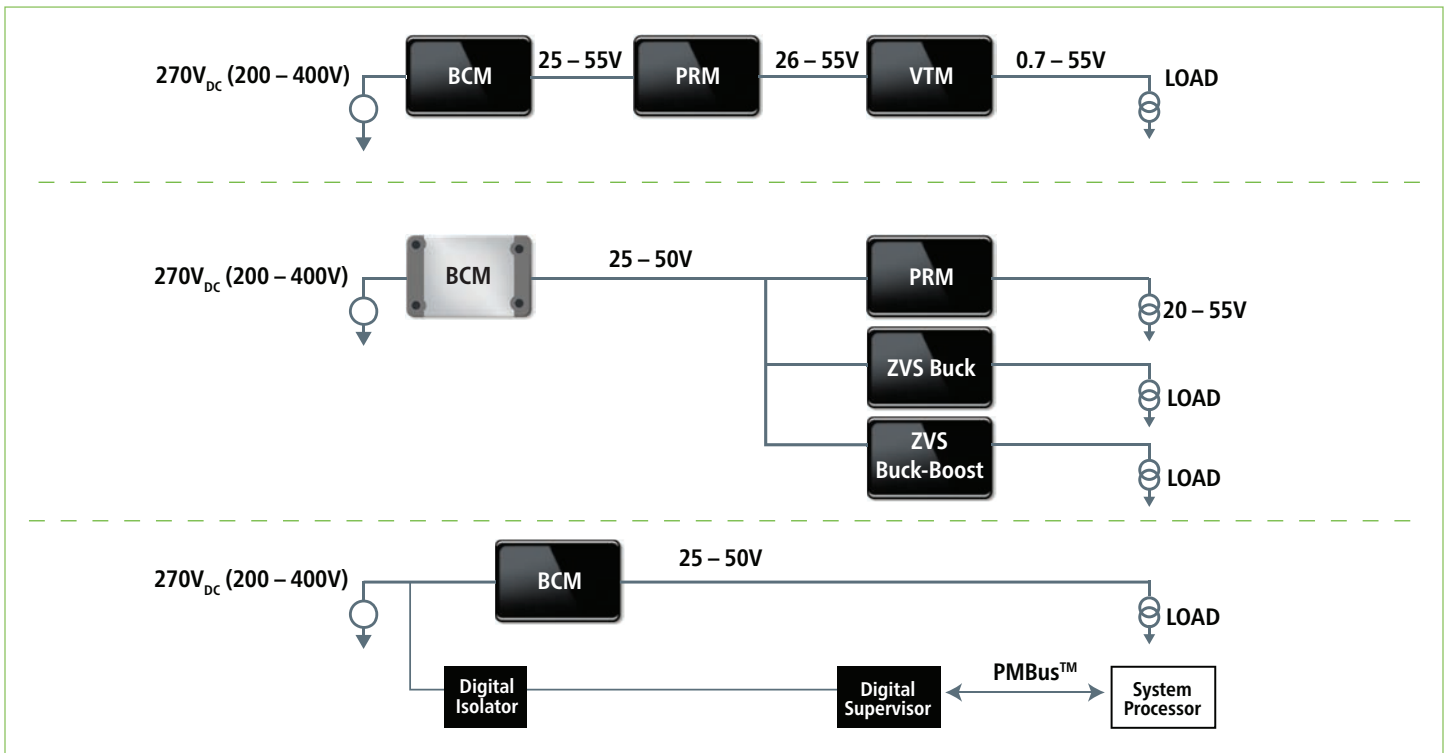
- High efficiency: Up to 98%
- High power density: Up to 2342W/in<sup>3</sup>
- Isolation:
  - VI Chips & ChiPs: 4242V<sub>DC</sub>
  - VIAs: 2121V<sub>DC</sub>
- Low AC impedance
  - Bulk capacitance elimination
- Thermally adept VIA and ChiP modules
  - Enables easy thermal design, possibly eliminating the need for a fan; Chassis mount version enables system chassis to be part of thermal design
- Integrated filtering to meet Class A or Class B EMI
  - Simplifies EMI and surge protection design, faster time to market
- Analog or Digital Control Interface
  - Digital PMBus<sup>®</sup> communication allows control and telemetry capability within system design
- Array capable, modular power component
  - Simple modular solution enables 270V conversion to be implemented for multiple power levels
- Voltage, current and temperature protections



## Part Numbers

Model Number	Input (V)	Output (V)	Output Current (A)	Package	Operating Temperature Range (°C)
MBCM270F338M235A00	240 – 330	30.0 – 41.25	7.3	Full VI Chip	–55 to 125
MBCM270F450M270A00	240 – 330	38.3 – 55	6.25	Full VI Chip	–55 to 125
BCM6123xD0G5030yzz	200 – 400	25 – 50	30	6123 ChiP	–55 to 125
BCM4414xD0G5030yzz	200 – 400	25 – 50	30	4414 VIA	–55 to 100

## Typical Applications



©2019 Vicor Corporation. All rights reserved. The Vicor name is a registered trademark of Vicor Corporation.

PMBus® is a registered trademark of SMIF, Inc.

All other trademarks, product names, logos and brands are property of their respective owners.