

# DCM™ Family

## Isolated, Regulated DC-DC Converter Modules

For use in: Industrial and Process Control, Distributed Power, ATE, Communications, Defense/Aerospace, Semiconductor Manufacturing Equipment (SME), Transportation.

### Features and Benefits

- Up to 600 W, 43.5 A continuous
- 93% peak efficiency
- Up to 1,244 W/in<sup>3</sup> power density
- Up to 4,242 Vdc isolation
- ZVS high frequency switching
- Fully operational current limit
- OV, OC, UV, short circuit and thermal protection
- Integrated filtering, remote or local sense, enhanced thermal management, and tight output voltage regulation over all lines and load conditions for DCM VIA applications



### Product Description

The DCM is an isolated, highly efficient, regulated DC-DC converter utilizing high frequency zero voltage switching (ZVS) topology, operating from an unregulated, wide range input to generate an isolated output. Modular DCM converters and downstream DC-DC products support efficient power distribution, providing superior power system performance and connectivity from a variety of unregulated power sources to the point of load. Leveraging the thermal and density benefits of Vicor's ChiP packaging technology,

the DCM ChiP module offers flexible thermal management options with very low top and bottom side thermal impedances while the DCM VIA module additionally provides integrated EMI filtering, tight output voltage regulation, and a secondary-referenced control interface while retaining the fundamental design benefits of the conventional brick architecture.

### Family of DCM Products

■ = Also Available in VIA package

Nominal Input (V)	Package Size	Power (W) by Nominal Output Voltage (V)								
		3.3	5	12	13.8	15	24	28	36	48
300 (180 – 420)	4623 ChiP or 3714 VIA			400	500		600	500		500
290 (160 – 420)	4623 ChiP				600					
275 (120 – 420)	4623 ChiP			375				375		
270 (160 – 420)	4623 ChiP or 3714 VIA	150	250	500		500	500	500		500
48 (36 – 75)	3623 ChiP or 3414 VIA		160	320		320	320	320	320	320
30 (9 – 50)	3623 ChiP	80	80	160			160	160		160
28 (16 – 50)	3623 ChiP or 3414 VIA	120	160	320		320	320	320		320
24 (18 – 36)	3623 ChiP		180	320		320	320	320	320	320

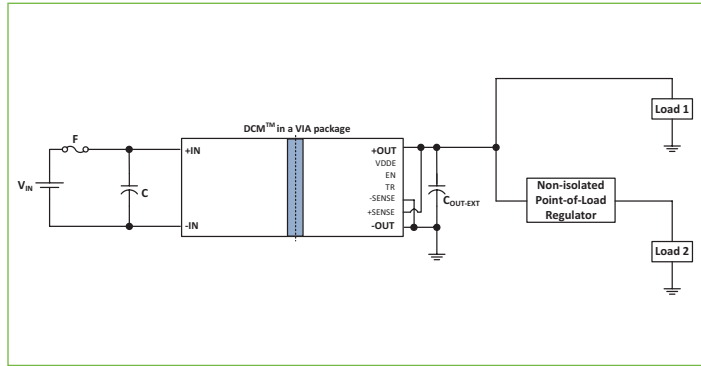
### DCM Part Numbering

Product Function			Package Length	Package Width	Package Type	Internal Reference				Product Grade (Case Temperature)	Option Field	
D	C	M	37	14	x	D2	H	26	D7	y	z	z
DCM = DC-DC Converter			ChiP: mm x 10	T = Thru Hole ChiP	Internal Reference					T = -40 to 125°C M = -55 to 125°C	ChiP 00 = Analog	
			VIA: Inches x 10	B = Board VIA V = Chassis VIA						C = -20 to 100°C [a] T = -40 to 100°C [a]	VIA 01 = Chassis/Analog 05 = Short Pin/Analog 09 = Long Pin/Analog	

[a] High temperature power derating may apply.

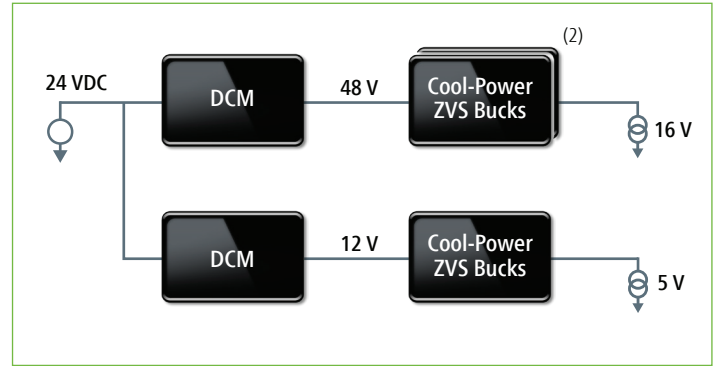
## Typical Application

Single DCM3714xD2H26D7yzz in Local Sense Operation, to a non-isolated regulator, and direct to load



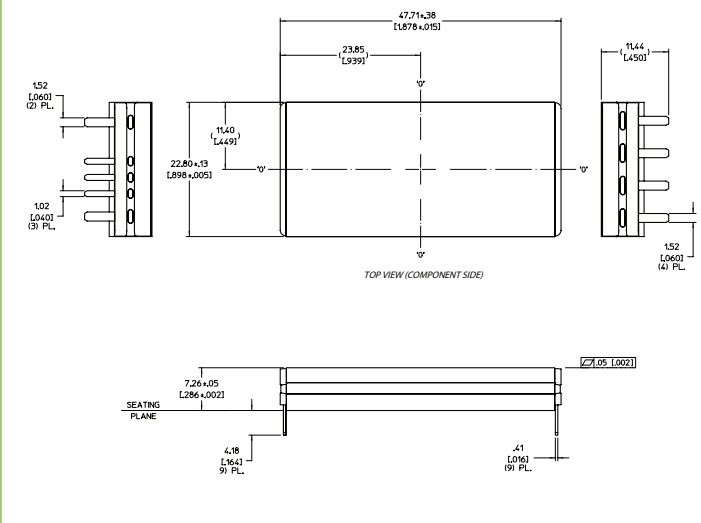
## Block Diagram

Typical 24 V input to point of load.

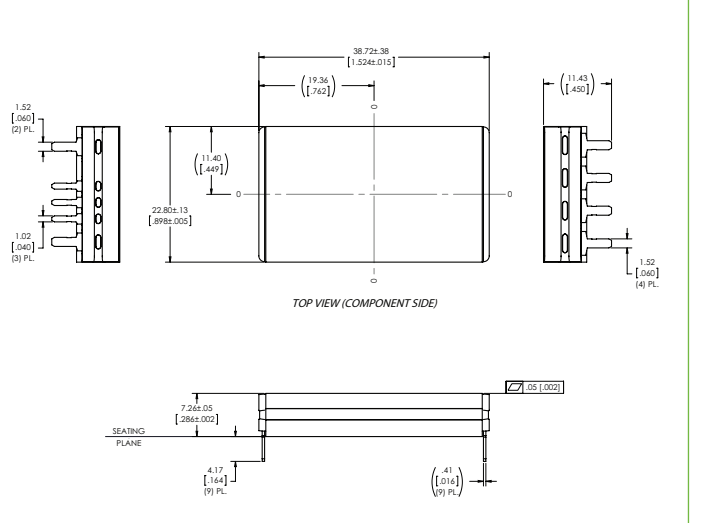


## ChiP Outline Drawings

### 4623 ChiP Package



### 3623 ChiP Package



## VIA Outline Drawing Chassis mount version shown

