VI Chip® DCM™

Isolated, Regulated DC-DC Converter Module

For use in Industrial Process and Controls, Automotive, Military (Fixed & Mobile Platforms)
Power Distribution Systems, MIL-STD-1275 and MIL-STD-704E/F Systems

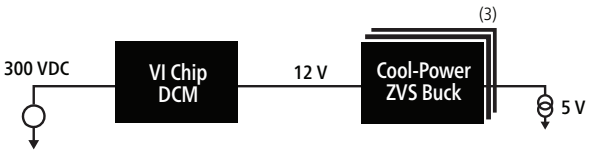
Features & Benefits

- **Nominal input voltages of 300, 290, 270, 48, 28, 24 V**
- **Output voltages cover 48, 36, 28, 24, 15, 12, 5 V outputs**
- **High power density: up to 1,244 W/in³ in a 1.67 in² footprint (76 W/cm³ in a 10.77 cm²)**
- **Output power: up to 600 W**
- **High efficiency: over 93%**
- **Isolation: up to 4,242 Vdc**
- **Array eight units with no power derating**
- **Double-sided cooling**

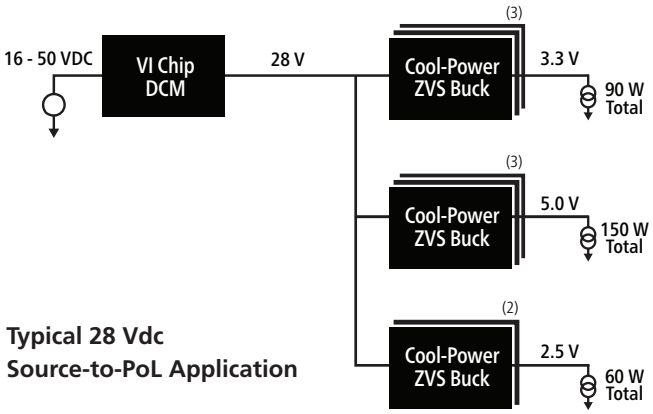
Description

Compared to traditional Bricks, VI Chip DCMs are the highest power density isolated and regulated DC-DC converters in the market. Board-mountable, these products enable power system designers to optimize the size, weight, and total cost of their products.

Block Diagrams



Typical 300 Vdc Source-to-PoL Application



Typical 28 Vdc Source-to-PoL Application

Part Numbering

DCM 290 P 138 T 600 A 4 0

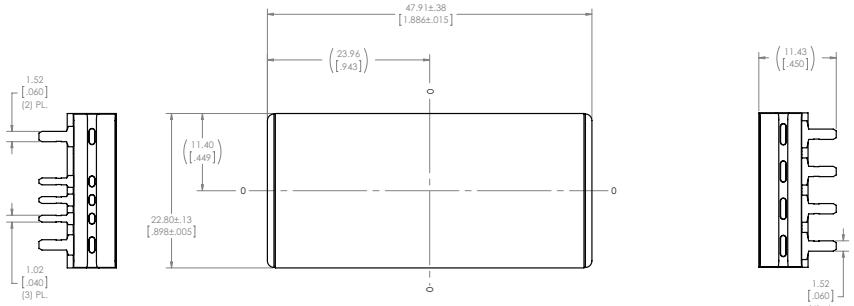
Device	Input Voltage Range	Package Type	Output Voltage x10	Temperature Grade	Output Power	Rev	Package Size	Version
DCM **MDCM** = (MIL-COTS)	**24** (18 – 36) **28** (16 – 50) **48** (36 – 75) **270** (160 – 420) **290** (160 – 420) **300** (180 – 420)	**P** = ChiP Through-Hole	**120** = 12 V **138** = 13.8 V **150** = 15 V **240** = 24 V **280** = 28 V **360** = 36 V **480** = 48 V	**T** = -40 to 125°C **M** = -55 to 125°C	**180** = 180 W **320** = 320 W **400** = 400 W **500** = 500 W **600** = 600 W	**A**	**4** = 4623 **5** = 3623	**0** = Analog

Product Table

Industrial	Nominal Input (V)	Package Size	Power (W) by Nominal Output Voltage (V)							
			5	12	13.8	15	24	28	36	48
Industrial HV	**300**	4623		400			600	500		500
Telecom/Datacom	**48**	3623		320				320	320	320
Industrial LV	**24**	3623	180	320		320	320	320	320	320
EV/HEV	**290**	4623			600					
MIL-COTS	**270**	4623	250	500			500	500		
MIL-COTS	**28**	3623	180	320		320	320	320		320

Outline Drawings

4623 ChiP Package



NOTES:
1- RoHS COMPLIANT PER CST-0001 LATEST REVISION.

3623 ChiP Package