

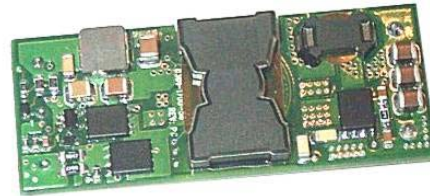
Bus Converter

48V Input / 140W Output



07CR “Cimarron” Series PRELIMINARY

- Ideal for Intermediate Bus Architectures
- Industry standard eighth-brick package
- Up to 120W at 95% efficiency
- 1500V isolation
- Remote on/off
- Low cost



Description

The 07CR “Cimarron” Series are isolated DC/DC converters that operate from a nominal 48V source. These converters are intended to provide isolation and step down to generate an intermediate bus for the purpose of powering non-isolated Point-of-Load (POL) converters. These units will provide up to 140W of output power from a nominal 48V input with either a 4:1 or 6:1 ratio. These units are designed to be highly efficient and very low cost and are thus unregulated. The downstream POL converters will provide the precise regulation required by the load. Features include remote on/off, over current protection and undervoltage lockout. These converters are provided in an industry standard eighth-brick package.

Part Selection

Output Voltage	Input Voltage	Max. Output Current	Max. Output Power	Typical Efficiency	Model Number
8V	48V	18A	140W	95%	07CR-18S08L
12V	48V	12A	140W	95%	07CR-12S12L

Change last character in part number from “L” to “H” for Active High On/Off Logic (e.g 07CR-18S08H)

Input Specifications

Parameter	Min	Typ	Max	Notes
Input Voltage Range	36 VDC		60 VDC	
Input Current (no load)			45mA	
Input Current (full load)			3A	
Reflected Ripple Current (pk-pk)			10mA rms 30mA pk-pk	Reflected ripple current through a 10uH source inductor at nominal input voltage and rated load current.

Output Specifications

Parameter	Min	Typ	Max	Notes
Output Voltage Setpoint 07CR-18S080 07CR-12S120		$V_{in} / 6$ $V_{in} / 4$		Unregulated output will track input voltage with a 6:1 or 4:1 ratio.
Output Current 07CR-18S080 07CR-12S120			18A 12A	
Load Regulation 07CR-18S080 07CR-12S120		0.5V 0.7V		
Ripple & Noise 07CR-18S080 07CR-12S120			110mV / 20mV 150mV / 40mV	pk-pk / rms 0 to 20MHz Bandwidth Use 1.0uF ceramic cap and 15uF/100mOhm tantalum on output

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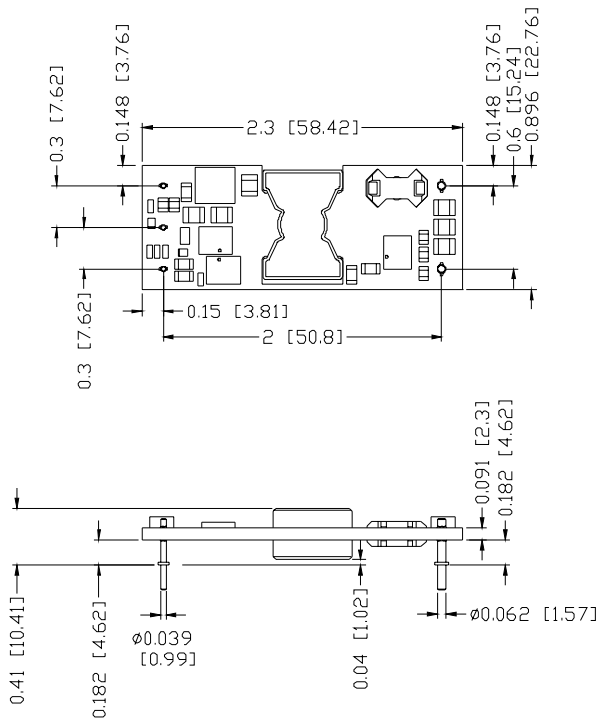
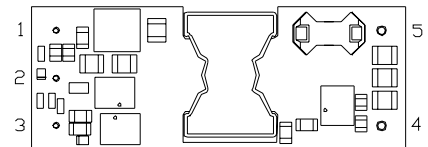


General Specifications

Parameter	Specification
Switching Frequency	200kHz (6:1) 150KHz (4:1) typical (fixed)
Dimensions	inches 2.30 x .9 x .39 mm 58.4 x 22.8 x 9.8
Weight	23g
Operating Temperature	-40°C to 85°C
Non-Operating Temperature	-55°C to 125°C
Protection Features	Continuous 120% to 140% max Io UVLO Vin < 34.0
Remote On/Off	Active Low (Optional Active High) Low: 0V to 0.8V High: 2.5V to 60V

Pin Connections

Pin	Function
1	+ Vin
2	Remote On/Off
3	- Vin
4	- Vout
5	+ Vout



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