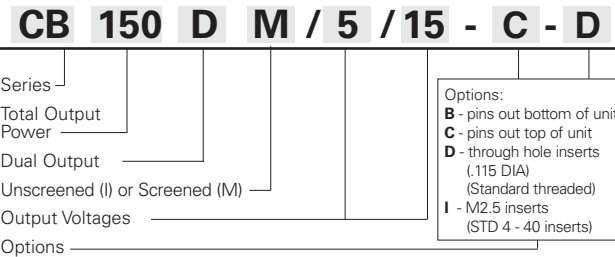


# CB150D dual-output DC/DC converters 16 – 40Vin, 2 – 28Vout, 150 watts



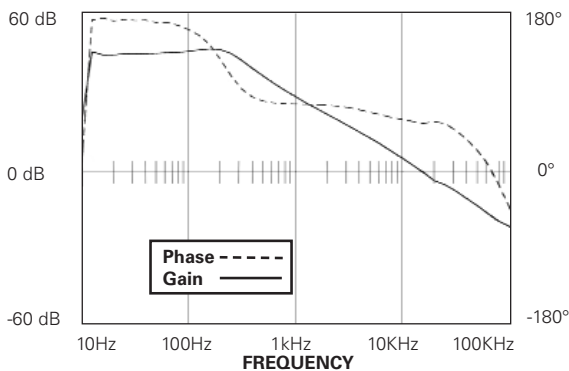
**How to Order:**



## INPUT CHARACTERISTICS - PER CHANNEL

	Min.	Typ.	Max.	Units
Input Voltage	16	28	40	Vdc
Brown Out (75% of FL)		13.5	14.4	Vdc
No Load Power Dissipation		1.3		W
Input Inrush Charge			2.0	mc
Reflective Ripple Current		3		%
Input Ripple Rejection(120Hz, 5Vout)		70		dB
Input Ripple Rejection(800Hz, 5Vout)		50		dB
Logic Disable Current (Sink)			150	μA
Logic Disable Voltage (TTL)	0		.8	Vdc
Logic Disable Power In		175		mw
Sync Input Voltage	3.0	5.0	5.25	Vc
Sync Input Frequency	480	500	550	KHz
Sync Input Duty Cycle	30	35	55	%
Efficiency up to:				%
>= 5 Vdc output		84		%
3.3 Vdc output		80		%
2 Vdc output		72		%
EMI: Units conform to MIL-STD-461D with companion filter (CBF75)				
Input Transient: Units can withstand 50Vdc transients for up to 100ms per MIL-STD-704E				

## STABILITY



## FEATURES

- .50 Inch Profile
- Provides 2 Independent 75W Outputs from 2V to 28V
- Remote Turn On / Output Status (TTL)
- Output Voltage Trim Pin
- Output Overvoltage Protection
- Output Overcurrent Protection
- Over Temperature Protection
- Fixed Frequency (500kHz) Conversion
- Synchronization Input
- High Temperature Burn-In
- 100% Environmental Screening (M Models)

## SELECTION CHART

Nominal Output Voltage (Volts)	Output Current (Amps)
2	15
3.3	15
5	15
5.2	14.5
12	6.3
15	5.0
24	3.2
28	2.7

## OUTPUT CHARACTERISTICS- PER CHANNEL

	Min.	Typ.	Max.	Units
Set Point Accuracy		25	50 <sup>1</sup>	mV
Load Regulation		5	10 <sup>2</sup>	mV
Line Regulation		5	10 <sup>3</sup>	mV
Ripple P-P (10 MHz)		60	100 <sup>4</sup>	mV
Overvoltage Protection		125		% V <sub>out</sub>
Transient Response Time - Overshoot				
20-80% Load (@ Nom. Line)		100/100	500/250 <sup>5</sup>	μS /mV
Low Line - High Line (@ FL)		200/150	500/250 <sup>5</sup>	μS /mV
50-100% Load (@ Nom.Line)		100/100	500/250 <sup>5</sup>	μS /mV
Temperature Drift		0.02	0.05	%/°C
Long Term Drift		0.02	0.05	%/1KHrs
Current Limit	105	130	150	%
Short Circuit Current	20	25	75	%
Load Capacitance			30 <sup>6</sup>	μF
Remote Sense Compensation			0.5	Vdc
Status "OK" (TTL)	2.4		5	Vdc
Status "Bad" (TTL)	0		0.8	Vdc
Trim Range	90		110	%
Turn On Time		6	10	mS
Logic Turn On Time		5	10	mS

<sup>1</sup> or 1 % Vout, whichever is greater

<sup>2</sup> or 0.2 % Vout, whichever is greater from No Load to Full Load with line constant

<sup>3</sup> or 0.2 % Vout, whichever is greater from Low Line to High Line at Full Load

<sup>4</sup> or 1 % Vout, whichever is greater measured at 10 MHz Bandwidth

<sup>5</sup> or 5 % Vout, whichever is greater

<sup>6</sup> or 3 x Co, whichever is greater



Powering Business Worldwide

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# Industrial & military grade high density DC to DC converters

## TEMPERATURE CHARACTERISTICS

	Min.	Typ.	Max.	Units
Operating (Baseplate)	-55		+100	°C
Storage (Ambient)	-55		+125	°C
Thermal Resistance (Baseplate to Ambient)		8		°C/W
OverTemperature Shutdown		105		°C

## ENVIRONMENTAL SCREENING - M MODEL

Stabilization Bake:	+125°C for 24 hours similar to MIL-STD-883, M1008.2, Condition B
Temperature Cycling:	10 cycles at -55°C to +125°C (transition 5°C/minute) similar to MIL-STD-883, M1010, Condition B
Burn in:	160 hours @ 85°C minimum with $V_{in}$ = 28Vdc and output at full load
Final Testing	

## ENVIRONMENTAL SCREENING - I MODEL

Burn in:	16 hours @ 85°C minimum with $V_{in}$ = 28Vdc and output at full load
Final Testing	

See "Guide to Operation" for full details

## ISOLATION CHARACTERISTICS

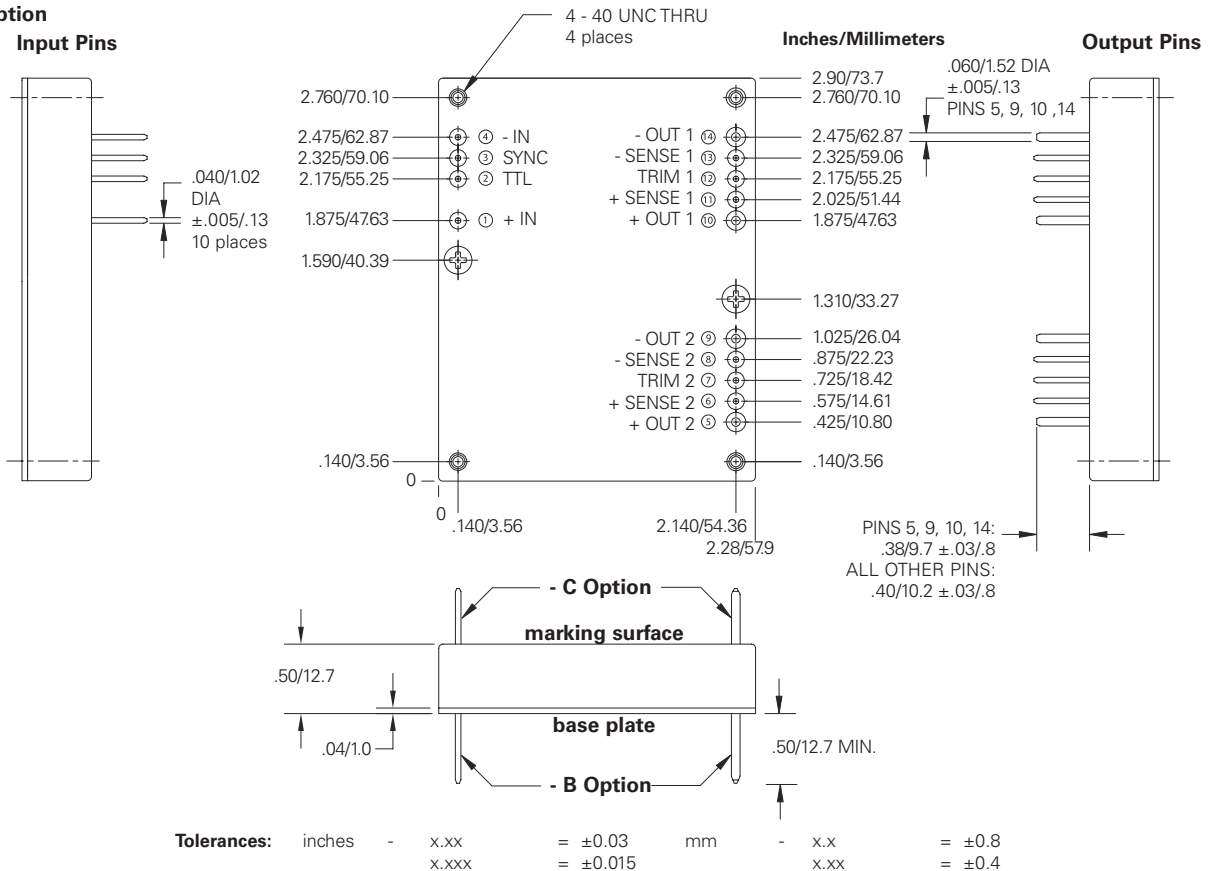
	Min.	Units
Isolation:		
Input to Output	500	Vdc
Output to Base	250	Vdc
Input to Base	250	Vdc
Insulation Resistance (@50 Vdc)	50	MOhm

## MECHANICAL CHARACTERISTICS

Weight		oz. grams
Size	2.28 x 2.90 x .50 inch 57.9 x 73.7 x 12.7 mm	
Volume	3.31 inch <sup>3</sup> 54.2 cm <sup>3</sup>	
Material	Pin Baseplate Case	Brass (Solder Plating) Aluminum 5052-H32 28 GA Steel (Nickel Plating)
Mounting	Standard D Option I Option	4 - 40 inserts in baseplate 0.115 DIA thru hole inserts M2.5 inserts in baseplate

## CASE DRAWINGS

### - C Option



For additional information, call 310.542.8561  
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