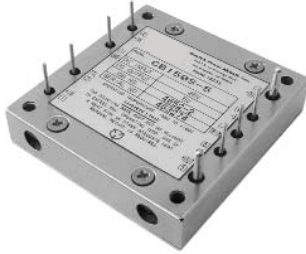
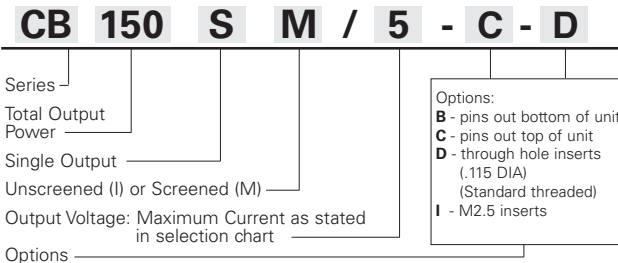


CB150S single-output DC/DC converters

16 – 40V_{in}, 2 – 28V_{out}, 150 watts



How to Order:



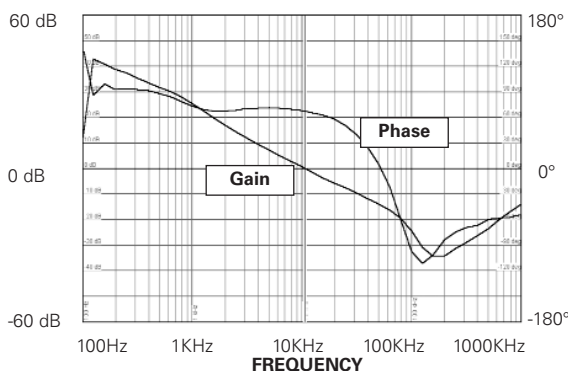
INPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Input Voltage	16		40	Vdc
Brown Out (FL)		14.4		Vdc
No Load Power Dissipation		3	4	W
Input Inrush Charge		5.3		mc
Reflective Ripple Current		100	200	mA
Input Ripple Rejection(120Hz)		50		dB
Input Ripple Rejection(800Hz)		40		dB
Logic Disable Current (Sink)			200	μA
Logic Disable Power In		500	800	mw
Efficiency up to: See Page 33				
>=5 Vdc Output		87		%
<5 Vdc Output		81		%

EML: Units conform to Mil-Std-461E (on the input leads) with companion filter (CBF150)

Input Transient: Units conform to Mil-Std-704E for transients up to 50Vdc for 0.1 second

STABILITY



FEATURES

- .50 Inch Profile
- Remote Turn On (TTL)
- Sync Input
- Output Overvoltage Protection
- Output Overcurrent Protection
- Over Temperature Protection
- Output Voltage Trim Pin
- High Temperature Burn-In
- 100% Environmental Screening (M Models)

SELECTION CHART

Nominal Output Voltage (Volts)	Output Current (Amps)	Model Number (Unscreened)	Model Number (Screened)
2	30	CB150SI/2	CB150SM/2
3.3	30	CB150SI/3.3	CB150SM/3.3
5	30	CB150SI/5	CB150SM/5
5.2	28.8	CB150SI/5.2	CB150SM/5.2
12	12.5	CB150SI/12	CB150SM/12
15	10	CB150SI/15	CB150SM/15
24	6.25	CB150SI/24	CB150SM/24
28	5.35	CB150SI/28	CB150SM/28

OUTPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Set Point Accuracy		25	50 ¹	mV
Load Regulation		5/0.1	20/0.2 ²	mV/%
Line Regulation		5/0.1	20/0.2 ³	mV/%
Ripple P-P (10 MHz)		60	100/1 ⁴	mV/%
Overvoltage Protection		125		% V _{out}
Transient Response Time - Overshoot				
20-80% Load (@Nom. Line)	100/100	500/250 ⁵		μS/mV
Low Line - High Line (@FL)	200/150	500/250 ⁵		μS/mV
50-100% Load (@Nom. Line)	100/100	500/250 ⁵		μS/mV
Temperature Drift	.02		0.05	%/°C
Long Term Drift	.02		0.05	%/1Khrs
Current Limit	105	130	150	% I _{out}
Short Circuit Current	25	50	75	% I _{out}
Remote Sense Compensation			0.5	Vdc
Trim Range	90		110	% V _{out}
Turn On Time		5	20	mS
Logic Turn On Time		5	10	mS

¹ or 1 % V_{out}, whichever is greater

² whichever is greater from No Load to Full Load with line constant

³ whichever is greater from Low Line to High Line at Full Load

⁴ whichever is greater measured at 10 MHz Bandwidth

⁵ or 5 % V_{out}, whichever is greater



Powering Business Worldwide

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or e-mail: Orders-EP@eaton.com

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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 Case (Ambient)		3		°C/W

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 min. with V_{in} =28Vdc and output at full load
Final Testing	

ENVIRONMENTAL SCREENING - I MODEL

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

See "Guide to Operation" for full details

ISOLATION CHARACTERISTICS

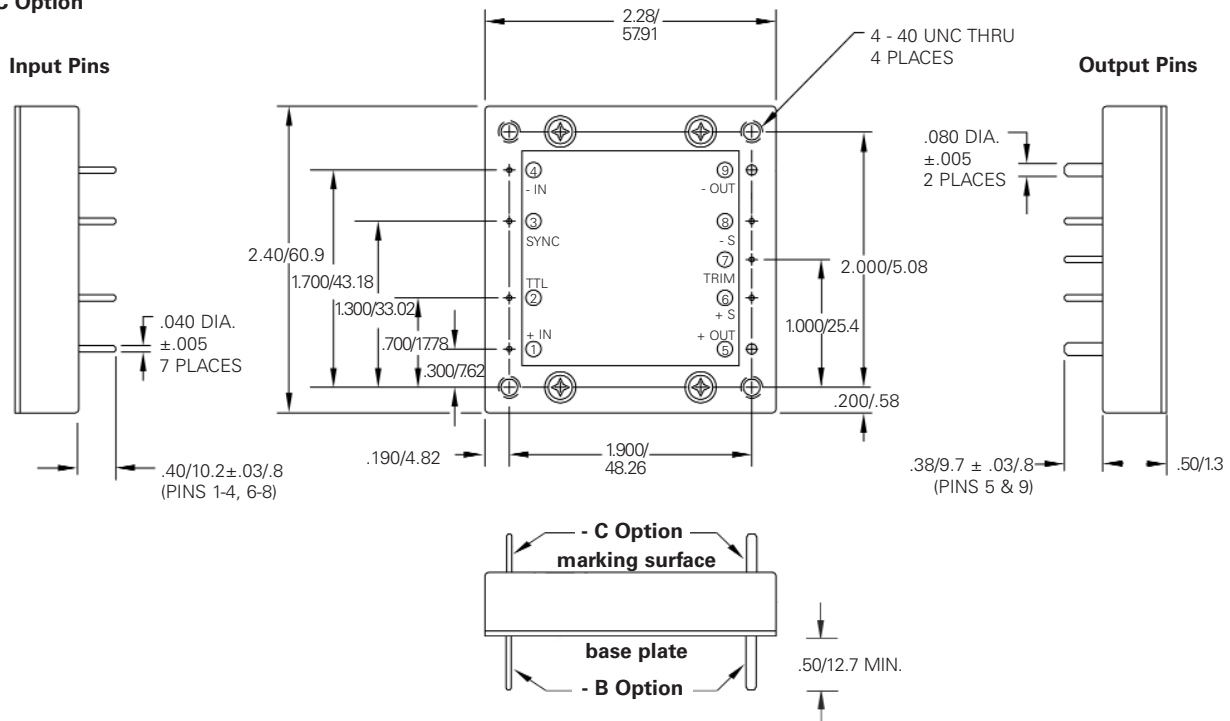
	Min.	Units
Isolation:		
Input to Output	500	Vdc
Output to Case	250	Vdc
Input to Case	250	Vdc
Insulation Resistance (@50 Vdc)	50	MOhm

MECHANICAL CHARACTERISTICS

Weight	6.0 170	oz. grams
Size	2.4 x 2.3 x 0.50 61.0 x 58.4 x 12.7	inch mm
Volume	2.48 48.61	inch ³ cm ³
Material	Pin Baseplate Case Finish (Case)	Brass (Solder Plating) Aluminum 5052-H32 28 GA Steel (Cold Rolled) Nickel Plating
Mounting	Standard I Option D Option	4-40 inserts provided in baseplate M2.5 metric inserts 0.115 DIA thru holes

CASE DRAWINGS

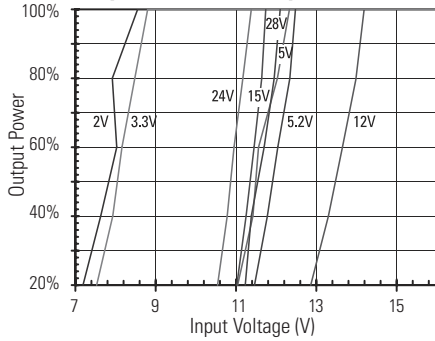
- C Option



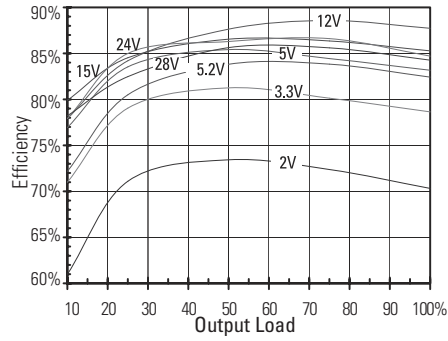
Tolerances: inches - x.xx = ±0.03 mm - x.x = ±0.8
 inches - x.xxx = ±0.015 mm - x.xx = ±0.4

Performance characteristics

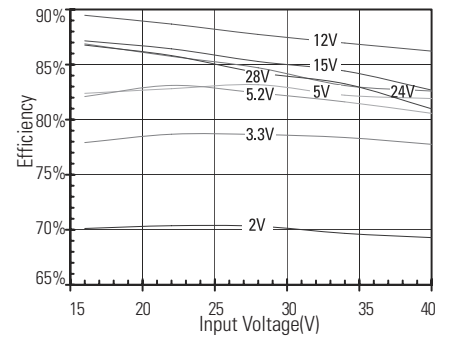
I. Input Voltage vs. Output Power



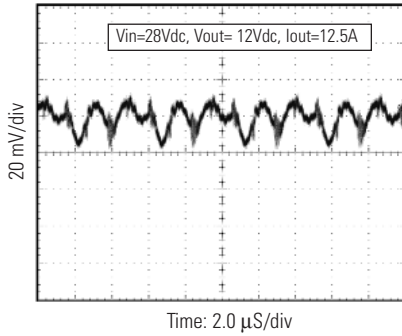
II. Efficiency vs. Output Power



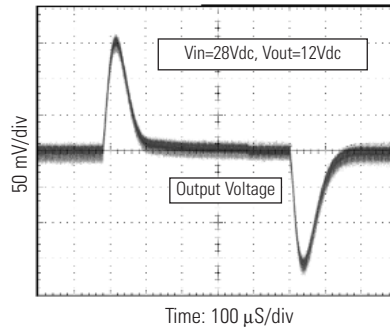
III. Efficiency vs. Input Voltage



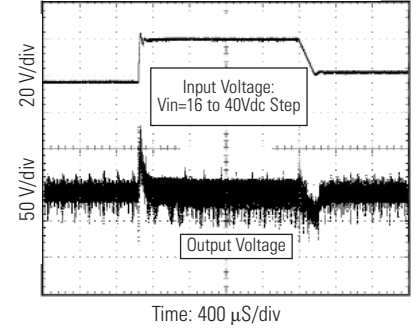
IV. Output Voltage Ripple



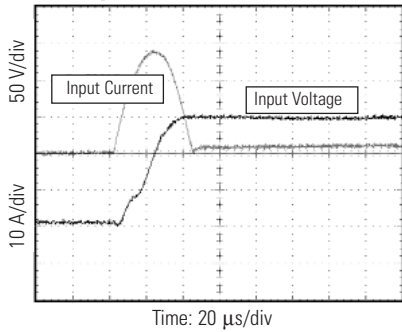
V. Load Transient Response



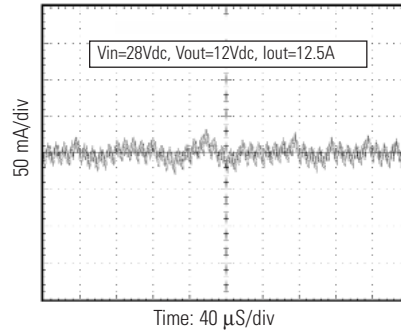
VI. Line Transient Response



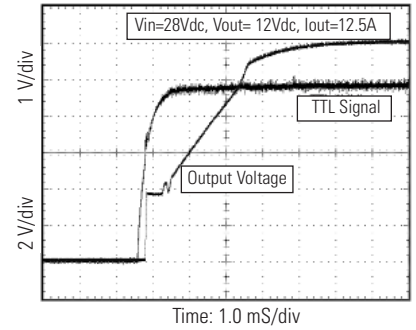
VII. Input Inrush Current



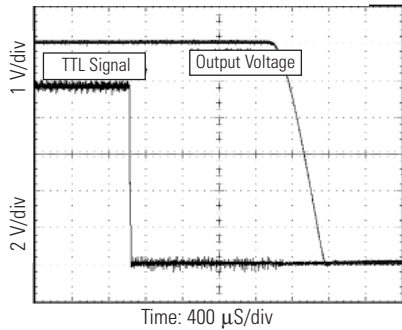
VIII. Input Current Ripple



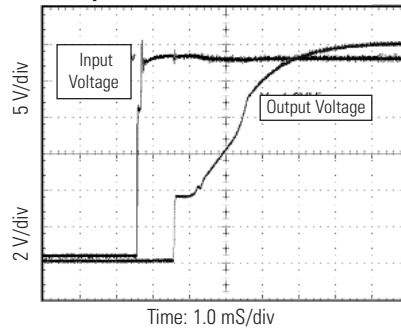
IX. TTL Turn On



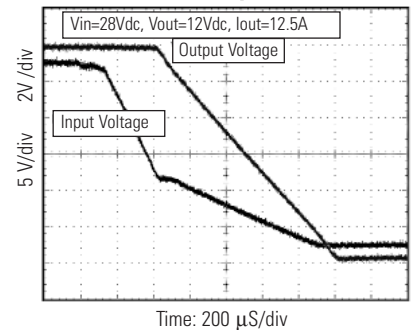
X. TTL Turn Off



XI. Input Turn-On



XII. Turn Off/ Hold-Up Time



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