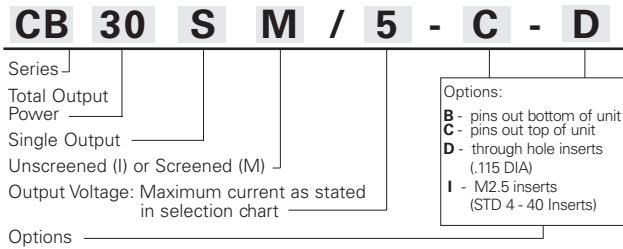


CB30S single-output DC/DC converters 16 – 40Vin, 2 – 28Vout, 30 watts



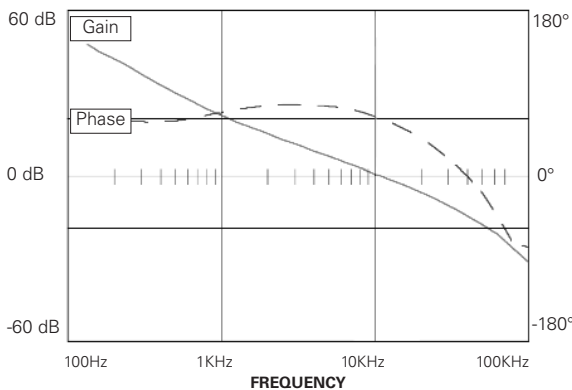
How to Order



INPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Input Voltage	16	28	40	Vdc
Brown Out (75% of Full Load) [fig. I]*			13.5	Vdc
No Load Power Dissipation		1.0		W
Logic Disable Current (Sink)			150	μA
Logic Disable Voltage (TTL)	0		0.8	Vdc
Logic Disable Power In		300		mw
Efficiency up to: See Page 28 [fig. II, III]*				
>=5 Vdc Output (FL)		87		%
<5 Vdc Output (FL)		81		%
EMI: Units conform to MIL-STD-461D with companion filter module (CBF30)				
Input Transient: Units can withstand 50V transients for up to 100 ms per MIL-STD-704E				

STABILITY



FEATURES

- .38 Inch Profile
- Remote Turn On (TTL)
- Output Overvoltage Protection
- Output Overcurrent Protection
- Over Temperature Protection
- Output Voltage Trim
- 100% Environmental Screening (M Models)

SELECTION CHART

Nominal Output Voltage (Volts)	Output Current (Amps)	Model Number (Unscreened)	Model Number (Screened)
2	6.0	CB30SI/2-C	CB30SM/2-C
3.3	6.0	CB30SI/3.3-C	CB30SM/3.3-C
5	6.0	CB30SI/5-C	CB30SM/5-C
5.2	5.8	CB30SI/5.2-C	CB30SM/5.2-C
12	2.5	CB30SI/12-C	CB30SM/12-C
15	2.0	CB30SI/15-C	CB30SM/15-C
24	1.3	CB30SI/24-C	CB30SM/24-C
28	1.1	CB30SI/28-C	CB30SM/28-C

OUTPUT CHARACTERISTICS

	Min.	Typ.	Max.	Units
Set Point Accuracy		25	50 ¹	mV
Load Regulation		10	20 ²	mV
Line Regulation		10	20 ³	mV
Ripple P - P (10 MHz) [fig. IV]*		50	100 ⁴	mV
Overvoltage Protection		125		% V _{out}
Transient Response (V _{out} 1%) Time/Overshoot [fig. V & VI]*				
20 - 80% Load (@ Nom. Line)		250/250	500/500	μS/mV
Low Line - High Line		250/250	500/500	μS/mV
50 - 100% Load (@ Nom. Line)		250/250	500/500	μS/mV
Temperature Drift		0.01	0.05	%/°C
Current Limit	105		150	% I _{out}
Short Circuit Current	25	50	75	% I _{out}
Trim Range	90		110	% V _{out}
Turn On Time [fig. XI]*		5		mS
Logic Turn On Time [fig. IX]*		2.5		mS

¹ 1% or 50mV, whichever is greater

² or 0.2% maximum, whichever is greater from no load to full load

³ or 0.2% maximum, whichever is greater from low line to high line

⁴ or 1% maximum, whichever is greater

* see figures on page 28



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Industrial & military grade high density DC to DC converters

TEMPERATURE CHARACTERISTICS

	Min.	Typ.	Max.	Units
Operating (Case)	-55		+100	°C
Storage (Ambient)	-55		+125	°C
Thermal Resistance Case (Ambient)		13		°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/min.) similar to MIL-STD-883, M1010, Condition B

Burn in: 160 hours @ 85°C minimum with $V_{in}=28V_{dc}$ and output at full load

Final Testing

ENVIRONMENTAL SCREENING - I MODEL

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

Final Testing

See "Guide to Operation" for full details

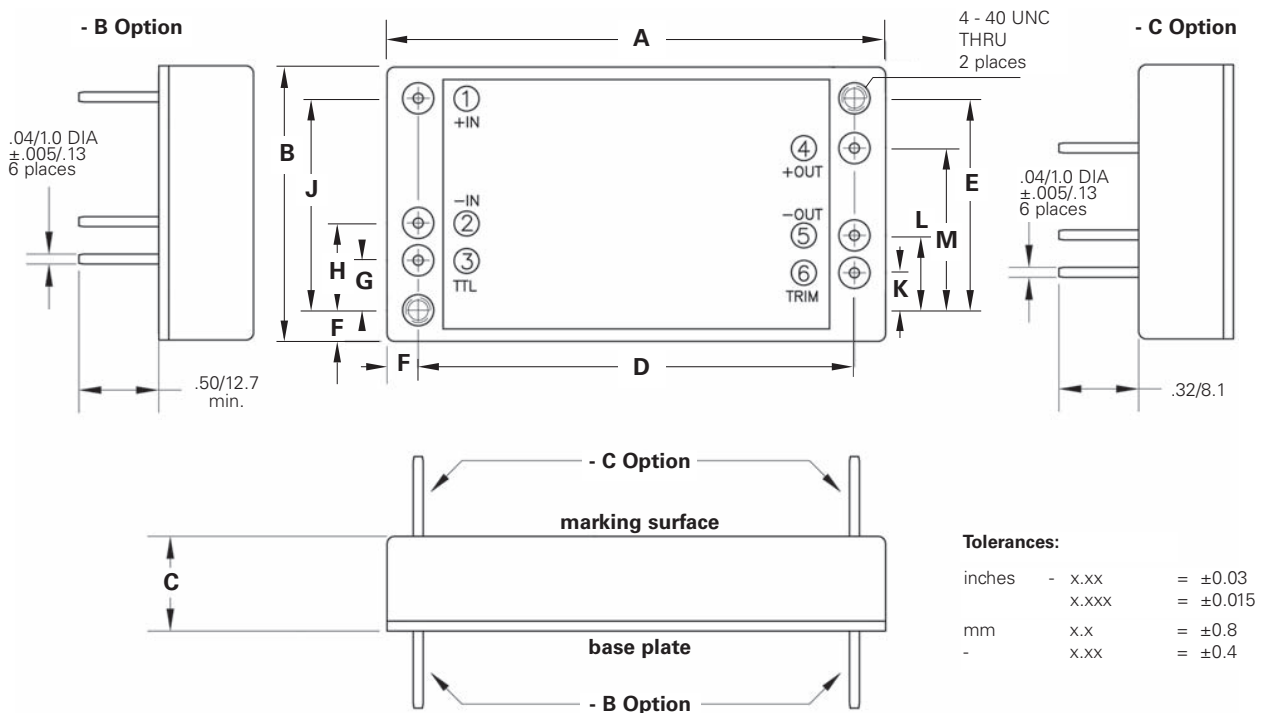
ISOLATION CHARACTERISTICS

	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	1.59 45	oz. maximum grams maximum
Size	1.1 x 2.0 x 0.38 27.9 x 50.8 x 9.7	inch mm
Volume	0.84 13.75	inch ³ cm ³
Material	Pin Base Case	Brass (Solder Plating) Aluminum 5052-H32 28 GA CRS (Nickel Plating)
Mounting	Standard I Option D Option	4-40 inserts in baseplate M2.5 metric inserts in baseplate 0.115 DIA thru holes in baseplate

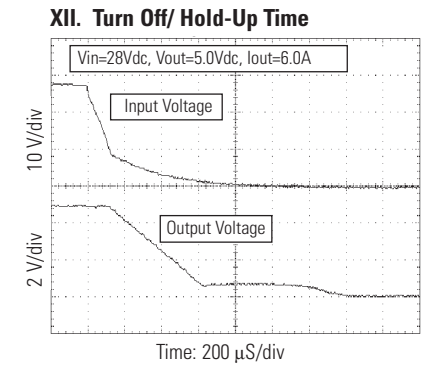
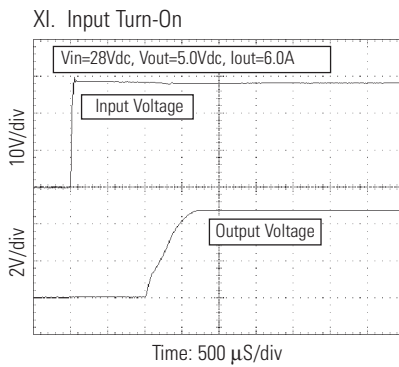
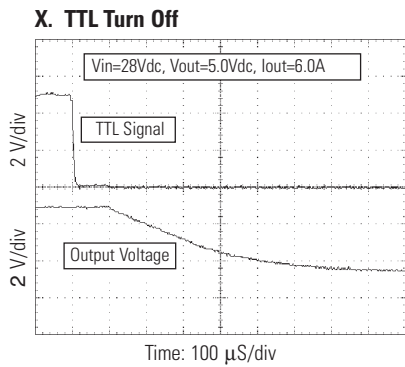
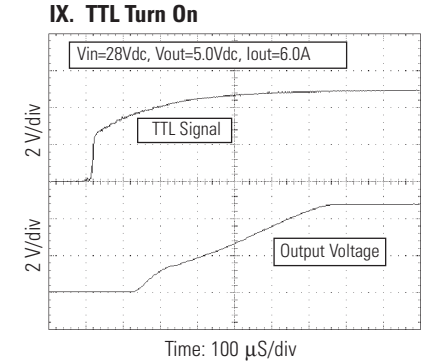
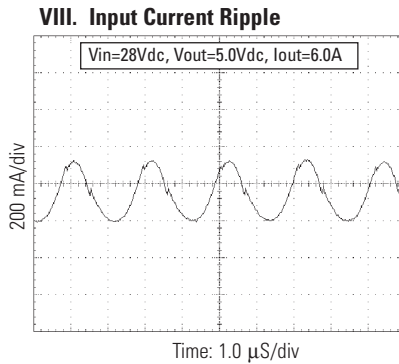
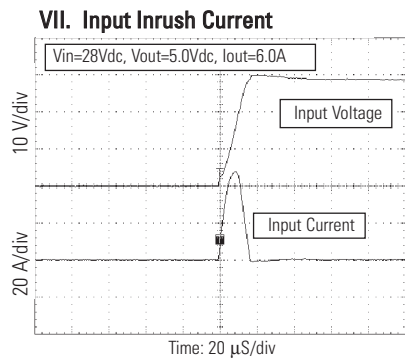
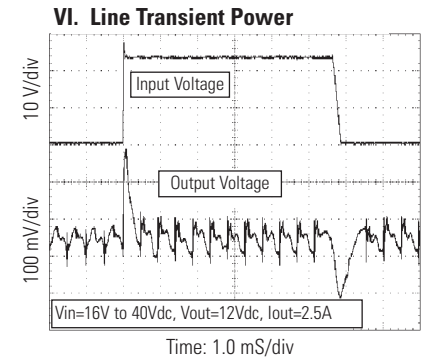
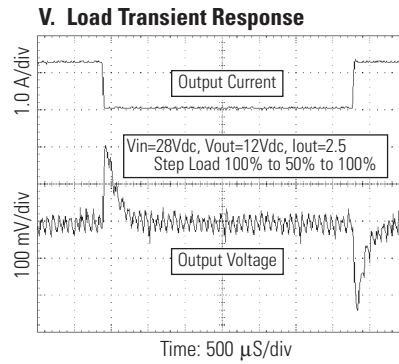
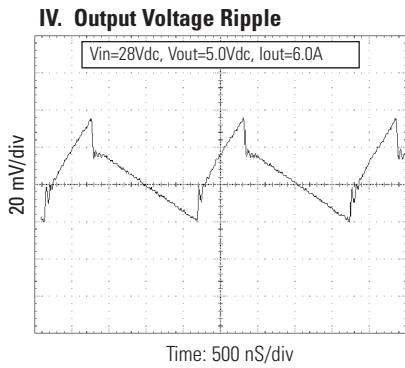
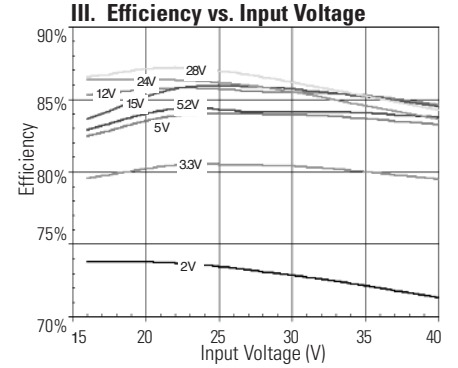
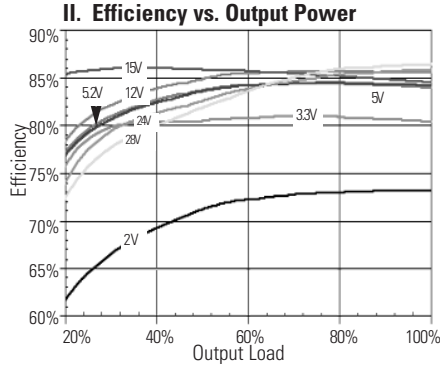
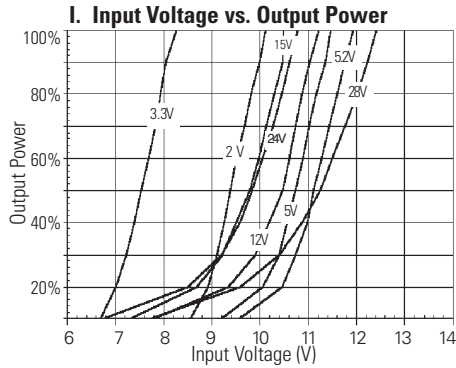
CASE DRAWINGS



Inches/Millimeters

A	B	C	D	E	F	G	H	J	K	L	M
2.00	1.10	.38	1.750	.850	.13	.200	.350	.850	.150	.300	.650
50.8	27.9	9.7	44.45	21.59	3.3	5.08	8.89	21.59	3.81	7.62	16.51

Performance characteristics



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