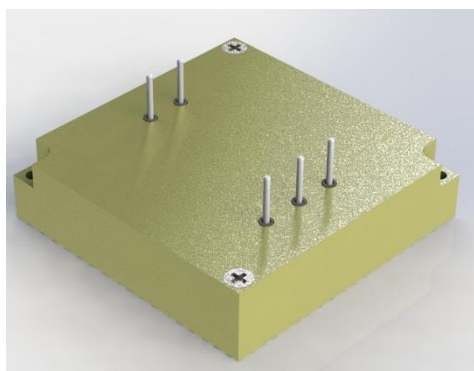




MDC040-28

DUAL OUTPUT DC/DC CONVERTER



- Dual Output
- Small Footprint, Low Profile 12.5mm Height
- Efficiency >78% Full Load
- Qualified to MI-STD-704 Input Requirements
- Qualified to MI-STD-461 EMI Requirements
- Qualified to MI-STD-810 Environmental Requirements
- All in One DC/DC Converter, No External Parts Req'd

DESCRIPTION:

The MDC040-28 is a compact, ruggedized, dual output all in one DC to DC Converter, requiring no external parts in order to meet MIL-STD-461 and MIL-STD-704 requirements. The MDC040-28 is based on Active Clamp Forward Converters with Synchronous Output Rectification achieving the highest possible efficiency. This power supply has built-in MIL-STD-461E/F EMI filtering including output over voltage, over current, over temperature, and input surge protections. All fitting in a rugged five sided aluminium enclosure that is under a half an inch tall (12.5mm). Both outputs can be configured independently and as either a positive or negative output with a common ground.

GENERAL SPECIFICATIONS					
INPUT VOLTAGE	16 - 40 VDC				
FREQUENCY RANGE	300 - 500KHz				
PART UMBER	MDC040-28-Xy-Xy				
OUTPUT VOLTAGE AND NOMINAL CURRENT	POS (X)	POS/NEG(y)		VOLTAGE	CURRENT
	A	p	n	3.3VDC	6A
	B	p	n	5VDC	4A
	C	p	n	6VDC	2A
	D	p	n	6.2VDC	2A
	E	p	n	15VDC	.75A
OUTPUT POWER (Max)	40W				
EXAMPLE PART NUMBER	+3.3VDC , -5VDC			MDC040-28-Ap-Bn	

PHYSICAL CHARACTERISTICS	
MAXIMUM CASE SIZE	50mm x 50mm x 12.5mm (L W H)
COOLING METHOD	Conduction
ENCAPSULATION	Conformal Coat
ENCLOSURE FINISH	Yellow Chromate
BASEPLATE FINISH	Aluminum clad PCB
INPUT/OUTPUT TERMINATION	.040" Gold Plated Brass Pins, Concord #09-8059-2-03
MOUNTING	(2x) M2 through
WEIGHT	< 50g

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PRIME POWER INC: (603) 329-4675.
1 OWENS CT.
HAMPSTEAD NH, 03841.



MDC040-28

DUAL OUTPUT DC/DC CONVERTER

ELECTRICAL SPECIFICATIONS	
LINE REGULATION	1% (Lo Line to Hi Line)
LOAD REGULATION	1% (1/2-FL W/SENSE)
PARD (RIPPLE NOISE)	20.0mVp-p typical (1% max.)
OVERCURRENT SETPOINT	150% typ (from nom.)
OVERVOLTAGE PROTECTION	Input- >50V no dam./80V 100mS/100V 50ms; Outputs – 120% of nom., passive
REVERSE POLARITY	-48Vdc, Indefinite
LOAD STEP RECOVERY	<10% of nom. Vout for 200ms (1/2 to F.L.)
EFFICIENCY (TYP.)	>80% at maximum load
ISOLATION	200Vrms between primary input and output and case
EMI FILTERING	MIL-STD-461E/F for CE101 and CE102

ENVIRONMENTAL SPECIFICATIONS*		
ALTITUDE	MIL-STD-810F	Method 500.1, Procedure 1
HIGH TEMPERATURE	MIL-STD-810F	Method 501.4 Procedure 1 & 2
LOW TEMPERATURE	MIL-STD-810F	Method 502.4 Procedure 1 & 2
HUMIDITY	MIL-STD-202G	Method 103B
FUNGUS	MIL-STD-810F	Method 508, Condition A
SALT FOG	MIL-STD-202G	Method 101 E, Test Condition A
SAND AND DUST	MIL-STD-810F	Method 501.4, Procedure 1 & 2
EXPLOSIVE ATMOSPHERE	MIL-STD-810F	Method 511, Condition A
ACCELERATION	MIL-STD-810F	Method 513.5, Procedure 1 & 2
VIBRATION	MIL-STD-810F	Method 514.2
SHOCK	MIL-STD-883	Method 2002.4

*Designed to meet.

TEMPERATURE SPECIFICATIONS	
OPERATING TEMPERATURE	-55 C to +85 C
STORAGE TEMPERATURE	-55 C to +125 C
THERMAL SHUTDOWN	Shut Down: + 105°C (±5° C) Auto Recovery: <95°C(±5°C)
POWER DERATING	Full Rated Power at: +85 C Baseplate Derate > +85 C Baseplate: 2.0 W/°C
TEMPERATURE COEFFICIENT	.02%/°C

PRELIMINARY: Please keep in mind that this document is used for marketing and provides general specifications which are preliminary. Any changes will be finalized and approved by customer when contracted.

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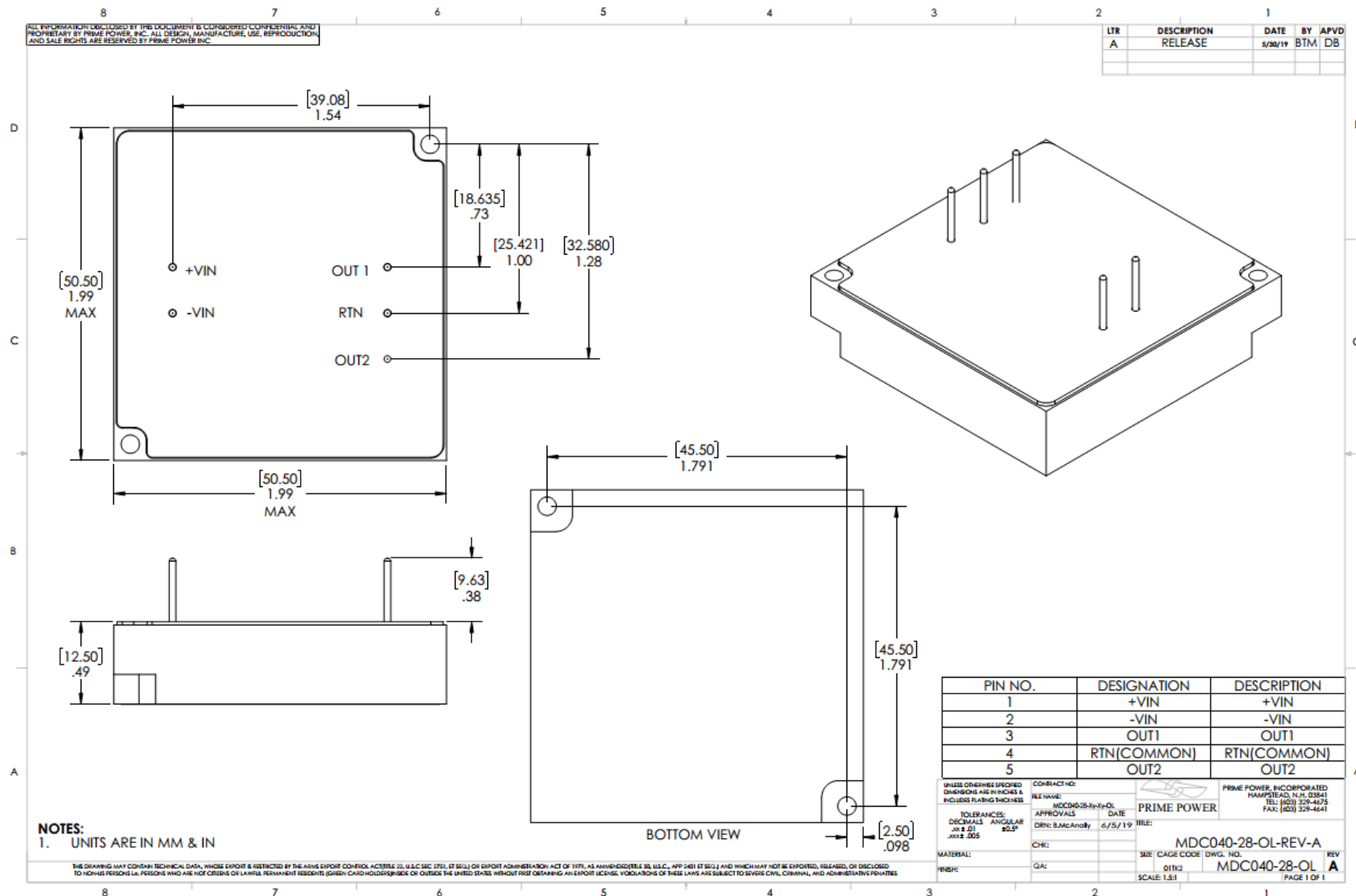
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MP2172A

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