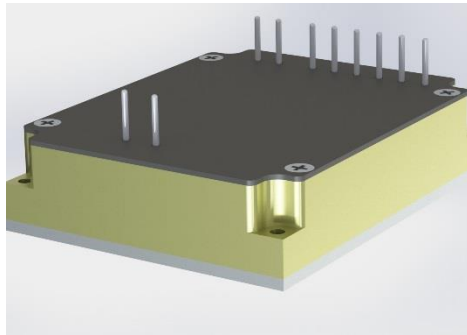




MP2174A

DC/DC CONVERTER WITH 4 ISOLATED OUTPUTS



- Four Fully Isolated Outputs
- Small Footprint
- MIL-STD-810F Compliant
- High Efficiency >85% Full Load
- MIL-STD-461E/F Compliance for EMI
- MIL-STD-704D and 1275A for Input Transients
- On Board Protection Features

DESCRIPTION:

This compact, ruggedized, multi output design is based on Active Clamp Forward Converters with Synchronous Output Rectification achieving the highest possible efficiency. It has four fully isolated outputs with all protection features included in a small footprint at this power level. This power supply also has built-in MIL-STD-461E/F EMI filtering. Features include; output over voltage, over current and over temperature protection.

<u>GENERAL SPECIFICATIONS</u>	
INPUT VOLTAGE	18-48 VDC
OPERATING FREQUENCY	500 KHz (fixed)
OUTPUT VOLTAGE	Four Isolated Outputs: +12V/0.5A; 2x +6.2V/2.5A; -5.0V/0.4A
OUTPUT POWER, MAX	32.0W
PHYSICAL SIZE	65mm (2.559") L x 52.5mm (2.067") W x 16mm (0.630") H
WEIGHT	< 80g
MTBF	>150,000 hours, calculated per MIL-STD-217F

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1 OWENS CT.
HAMPSTEAD NH, 03841.**



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<u>PHYSICAL CHARACTERISTICS</u>	
MAXIMUM CASE SIZE	65mm x 52.5mm x 16mm (L W H)
COOLING METHOD	Conduction
ENCAPSULATION	Conformal Coat
ENCLOSURE FINISH	Yellow Chromate
BASEPLATE FINISH	Yellow Chromate
INPUT/OUTPUT TERMINATION	.040" Gold Plated Brass Pins, Concord #09-8059-2-03
MOUNTING	(4x) M2 threaded holes
WEIGHT	< 80g

<u>ELECTRICAL SPECIFICATIONS</u>	
LINE REGULATION	1% (Lo Line to Hi Line)
LOAD REGULATION	1.0% (1/2-FL W/SENSE)
PARD (RIPPLE NOISE)	20.0mVp-p typical (1% max.) all outputs
OVERCURRENT SETPOINT	Approx. 150% from nominal for each output
SHORT CIRCUIT CURRENT	<10.0% from nominal for each of outputs, indefinitely
OVERVOLTAGE PROTECTION	Input- 80V 100mS/100V 50ms; Outputs – 120%, passive
REVERSE POLARITY	-36Vdc, Indefinite
LOAD STEP RECOVERY	<10% of nom. Vout for 200ms (1/2 to F.L.)
TURN-ON OVERSHOOT	<10% Vout nom for every output
EFFICIENCY (MIN)	85% min ; 90% at maximum loads for each output
ISOLATION	200Vrms between primary input and output and between outputs
EMI FILTERING	MIL-STD-461E/F for CE101 and CE102
OUTPUT POWER	32.0W max.



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<u>ENVIRONMENTAL SPECIFICATIONS</u>		
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

<u>TEMPERATURE SPECIFICATIONS</u>	
OPERATING TEMPERATURE	-55 C to +85 C (Baseplate)
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

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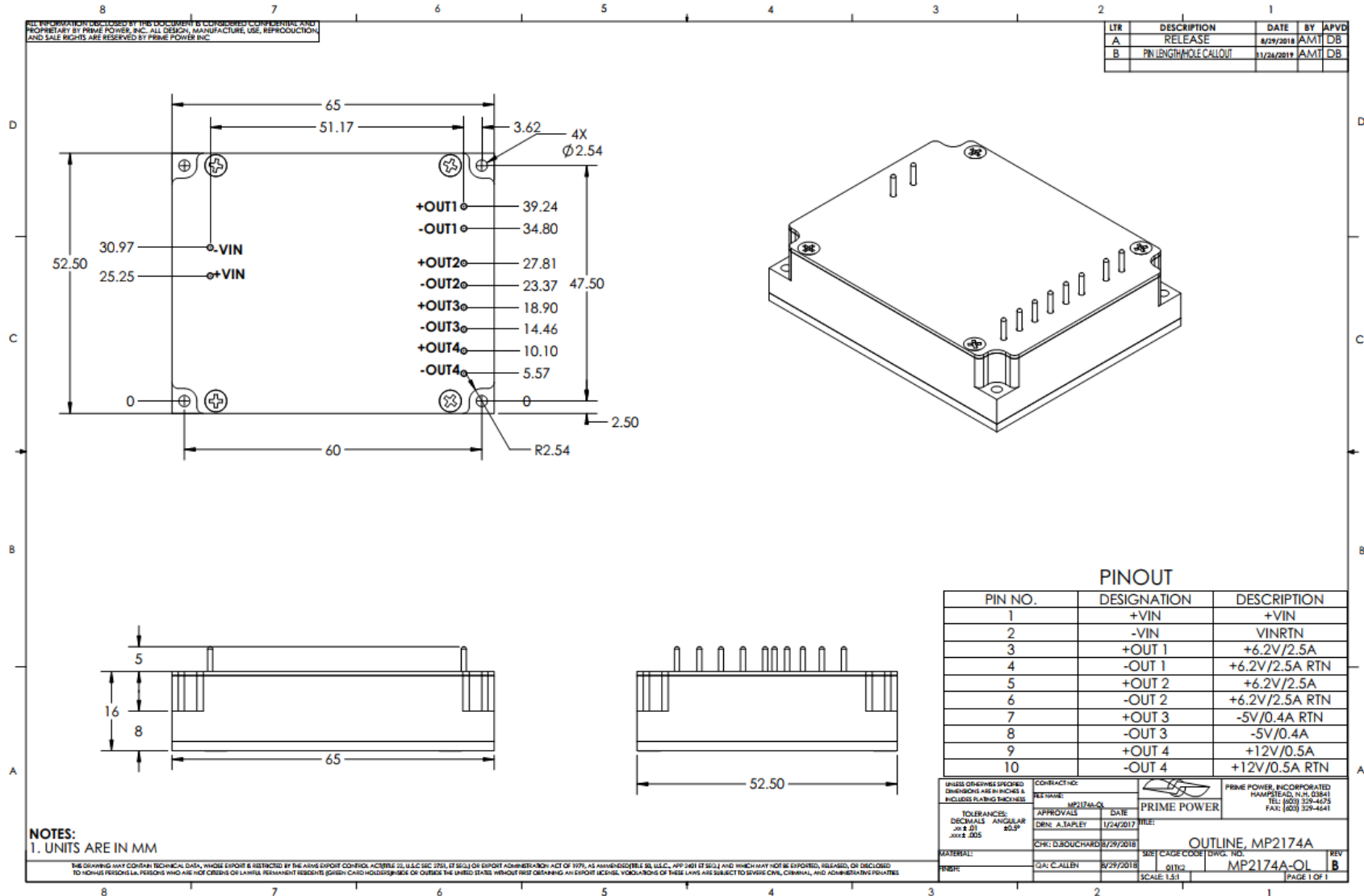
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