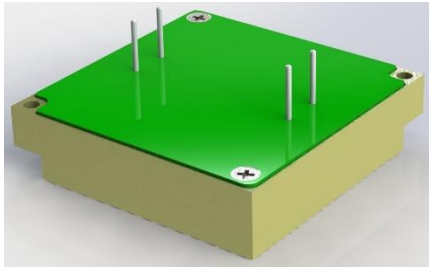




# MP2171

## 20 WATT DC/DC CONVERTER



- Small Footprint, Low Profile 12.5mm Height
- MIL-STD-810F Compliant
- Efficiency >80% Full Load
- MIL-STD-461E Compliance for EMI
- MIL-STD-704D and 1275A for Input Transients
- On Board Protection Features

### DESCRIPTION:

This compact, ruggedized, dual output design 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 aluminium enclosure that is under a half an inch tall (12.5mm).

<b>GENERAL SPECIFICATIONS</b>	
<b>INPUT VOLTAGE</b>	16 - 40 VDC
<b>FREQUENCY RANGE</b>	300 - 500KHz
<b>OUTPUT VOLTAGE AND NOMINAL CURRENT</b>	VOUT: 5V @ 4A
<b>OUTPUT POWER (Max)</b>	20W
<b>PHYSICAL SIZE</b>	50mm (1.968") L x 50mm (1.968") W x 12.5mm (0.492") H
<b>WEIGHT</b>	< 50g
<b>MTBF</b>	>150,000 hours, calculated per MIL-STD-217F

<b>PHYSICAL CHARACTERISTICS</b>	
<b>MAXIMUM CASE SIZE</b>	50mm x 50mm x 12.5mm (L W H)
<b>COOLING METHOD</b>	Conduction
<b>ENCAPSULATION</b>	Conformal Coat
<b>ENCLOSURE FINISH</b>	Yellow Chromate
<b>BASEPLATE FINISH</b>	N/A
<b>INPUT/OUTPUT TERMINATION</b>	.040" Gold Plated Brass Pins
<b>MOUNTING</b>	(2x) M2 through
<b>WEIGHT</b>	< 50g

[WWW.PRIME-POWER.COM](http://WWW.PRIME-POWER.COM)

[SALES@PRIME-POWER.COM](mailto:SALES@PRIME-POWER.COM)

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



# MP2171

## 20 WATT 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

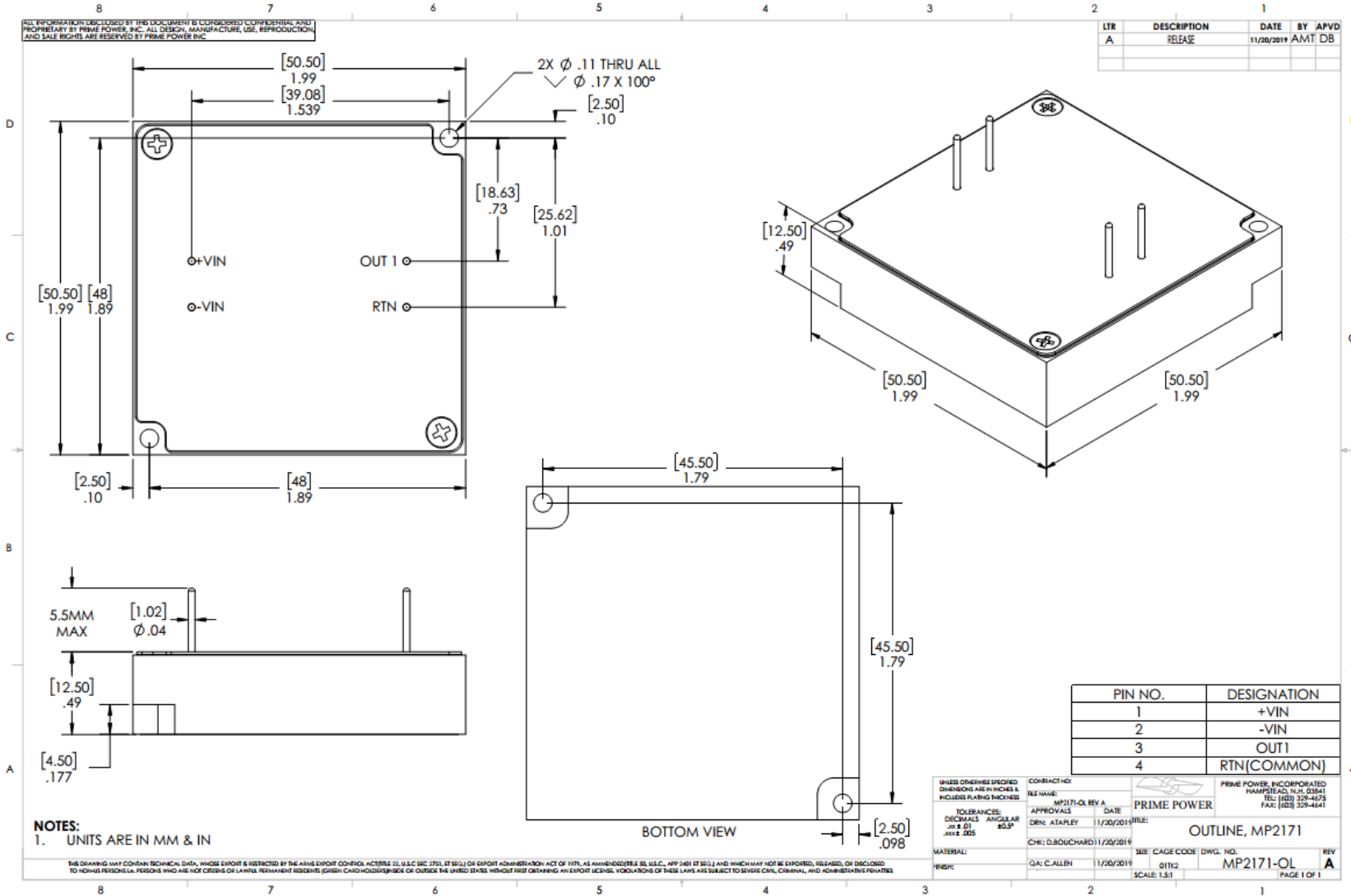
OPERATING TEMPERATURE	-55 C to +85 C
STORAGE TEMPERATURE	-55 C to +125 C
THERMAL SHUTDOWN	Shut Down: + 105°C (±5° C) Auto Recovery: <95°C(±5°C)
POWER DERATING	Full Rated Power at: +85 C Baseplate Derate > +85 C Baseplate: 2.0 W/°C
TEMPERATURE COEFFICIENT	.02%/°C

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.



# MP2171

## DUAL OUTPUT DC/DC CONVERTER



[WWW.PRIME-POWER.COM](http://WWW.PRIME-POWER.COM)

[SALES@PRIME-POWER.COM](mailto:SALES@PRIME-POWER.COM)

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