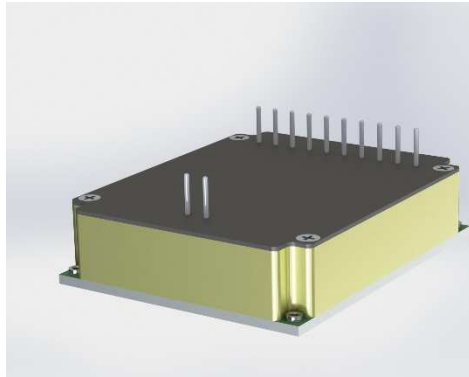




MP2175

DC/DC CONVERTER WITH 5 ISOLATED OUTPUTS



- Five 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 five fully isolated outputs with all protection features included making this one of the smallest footprints for a 5 output power supply 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	300 KHz - 500 KHz
OUTPUT VOLTAGE	Five Isolated Outputs: +12V/0.5A; 3x +6.2V/2.0A; -5.0V/0.4A
OUTPUT POWER, MAX	45.2W
PHYSICAL SIZE	68mm (2.680") L x 55.5mm (2.185") W x 16mm (0.630") H
WEIGHT	< 120g
MTBF	>150,000 hours, calculated per MIL-STD-217F

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



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<u>PHYSICAL CHARACTERISTICS</u>	
MAXIMUM CASE SIZE	68mm x 55.5mm 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 insert
WEIGHT	< 120g

<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.) for 6.2V / 30.0mVp-p typical (1% max.) for 5V and 12V
OVERCURRENT SETPOINT	~150% from nominal for each output
SHORT CIRCUIT OUTPUT	Indefinitely, no damage
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)	83% min ; 85% 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	45.2W max.

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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

TEMPERATURE SPECIFICATIONS

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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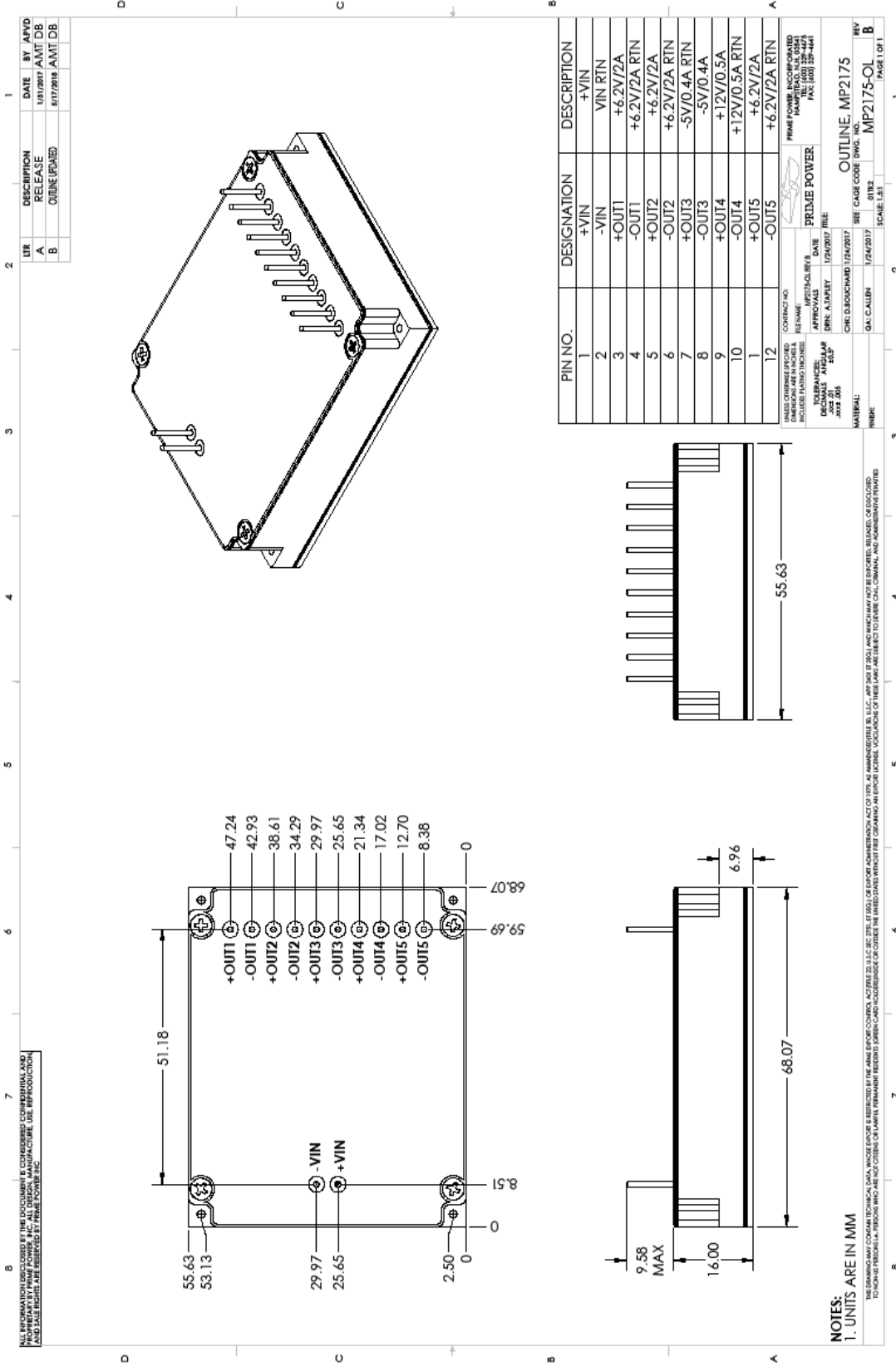
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