



MP2181

TRIPLE OUTPUT DC/DC CONVERTER



- Three Outputs
- Small Footprint, Low Profile 12.7mm Height
- MIL-STD-810F Compliant
- Efficiency >85% Full Load
- MIL-STD-461E Compliance for EMI
- MIL-STD-704D and 1275A for Input Transients
- On Board Protection Features

DESCRIPTION:

This compact, ruggedized, triple 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

GENERAL SPECIFICATIONS

INPUT VOLTAGE	18-48 VDC, < 16.5VDC no damaged		
FREQUENCY RANGE	500KHz (Fixed)		
OUTPUT VOLTAGE AND NOMINAL CURRENT	VOUT 1	VOUT 2	VOUT 3
	VOUT 1: 5V @ 3A	VOUT 1: +15V @ 0.75A	VOUT 1: -15V @ 0.75A
OUTPUT POWER (Max)	37.5W		
PHYSICAL SIZE	95.25mm (3.750") L x 55.88mm (2.200") W x 12.7mm (0.500") H		
WEIGHT	< 120g		
MTBF	>150,000 hours, calculated per MIL-STD-217F		

PHYSICAL CHARACTERISTICS

MAXIMUM CASE SIZE	95.25mm (3.750") L x 55.88mm (2.200") W x 12.7mm (0.500") H
COOLING METHOD	Conduction
ENCAPSULATION	Conformal Coat
ENCLOSURE FINISH	Yellow Chromate
INPUT/OUTPUT TERMINATION	20 Pin, RM272-020-311-2900 OR Equivalent
MOUNTING	(4x) .094" (2.387mm) Dia.
WEIGHT	< 120g

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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	130% from nominal
OVERVOLTAGE PROTECTION	Input- >52V no dam./80V 100mS/100V 50ms; Outputs – 120% of nom., passive
REVERSE POLARITY	-48Vdc, Indefinite
INHIBIT (ON/OFF)	TTL “1” = on / TTL “0” = off
LOAD STEP RECOVERY	<10% of nom. Vout for 200ms (1/2 to F.L.)
TURN-ON OVERSHOOT	<10% Vout nom
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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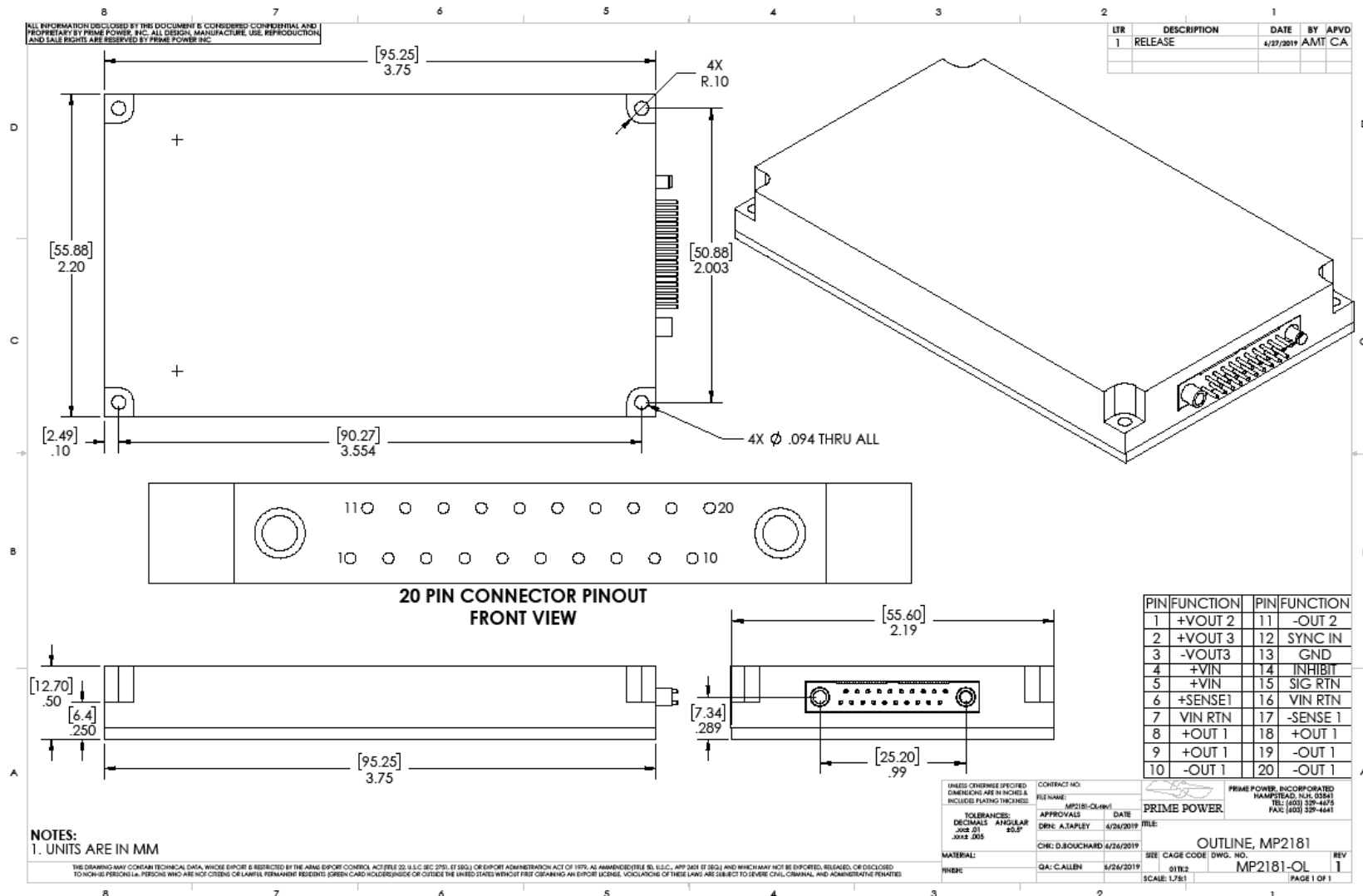
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DUAL OUTPUT DC/DC CONVERTER



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