



Micross' TPSU converter offers state of the art performance and is specifically designed for synthetic aperture radar applications. The TPSU provides excellent suppression of pulsed load current from output to input, and can be tailored to the specific spacecraft bus and equipment requirements.

**RAD-HARD, ITAR FREE**  
**100 kRad and 60 MeV**

## FEATURES

### Electrical Performance

- User Adjustable Main Output Voltage
- Isolated Pulse ON/OFF Telecommand
- Telemetries: ON/OFF Status, Temperature, Input, Current, Output Voltage
- Output Sequencing During Turn ON/OFF
- Input Under Voltage Protection and Output Overload Protection
- WC EOL Output Voltage Accuracy:  $\pm 2\%$  Including Line and Load
- Load Step Transient Response:  $\pm 5\%$  for a 50% to 100% Load Step

### Mechanical

PCB Outline Excl. Connectors      Mass  
TPSU:    180mm x 120mm x 25mm    < 550g

### Output CE:

V1 and V2: < 10.0mVrms (50Hz to 50MHz)  
V3 and V4: < 1.0mVrms (50Hz to 50MHz)

### CS Rejection Input to Outputs:

V1 and V2: > 40dB  
V3 and V4: > 85dB

### Output Configurations

V1 (Main 1): +30V to +60V    8A or 350W  
V2 (Main 2): +5V to +30V    3.5A or 50W  
V3 (Aux 1): +5V to +15V    1A or 8W  
V4 (Aux 2): -5V to -15V    1A or 5W

## BENEFITS

### Standard Form-Factors, Tailored to Spec

- Fully Customizable to Match Satellite Platform and Payload Requirements
- Outputs Can Be Configured to Customer Specifications
- Two High Efficiency Main Output + Two Low Noise Auxiliary Outputs
- On-Board EMC Filters Ensures Compliance Without Additional Filtering
- Input to Output Power Efficiency of up to 92%
- Design Data Package & Product Control Documentation Available

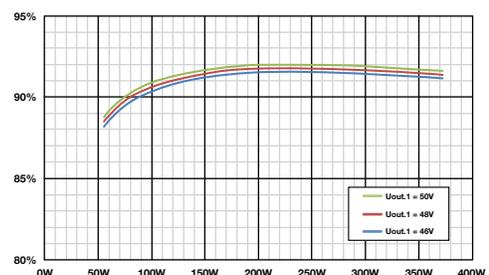
### Design Expertise

Our team helps review and specify payload specific DC-DC converters to ensure maximum compatibility and minimum risk at equipment level. We design, develop, manufacture and test complete DC-DC solutions for effortless payload integration.

### Rapid Delivery for Tailored Designs:

- 6 Months for Engineering Models
- 9 Months for CDR Data Package
- 12 Months for Flight Units

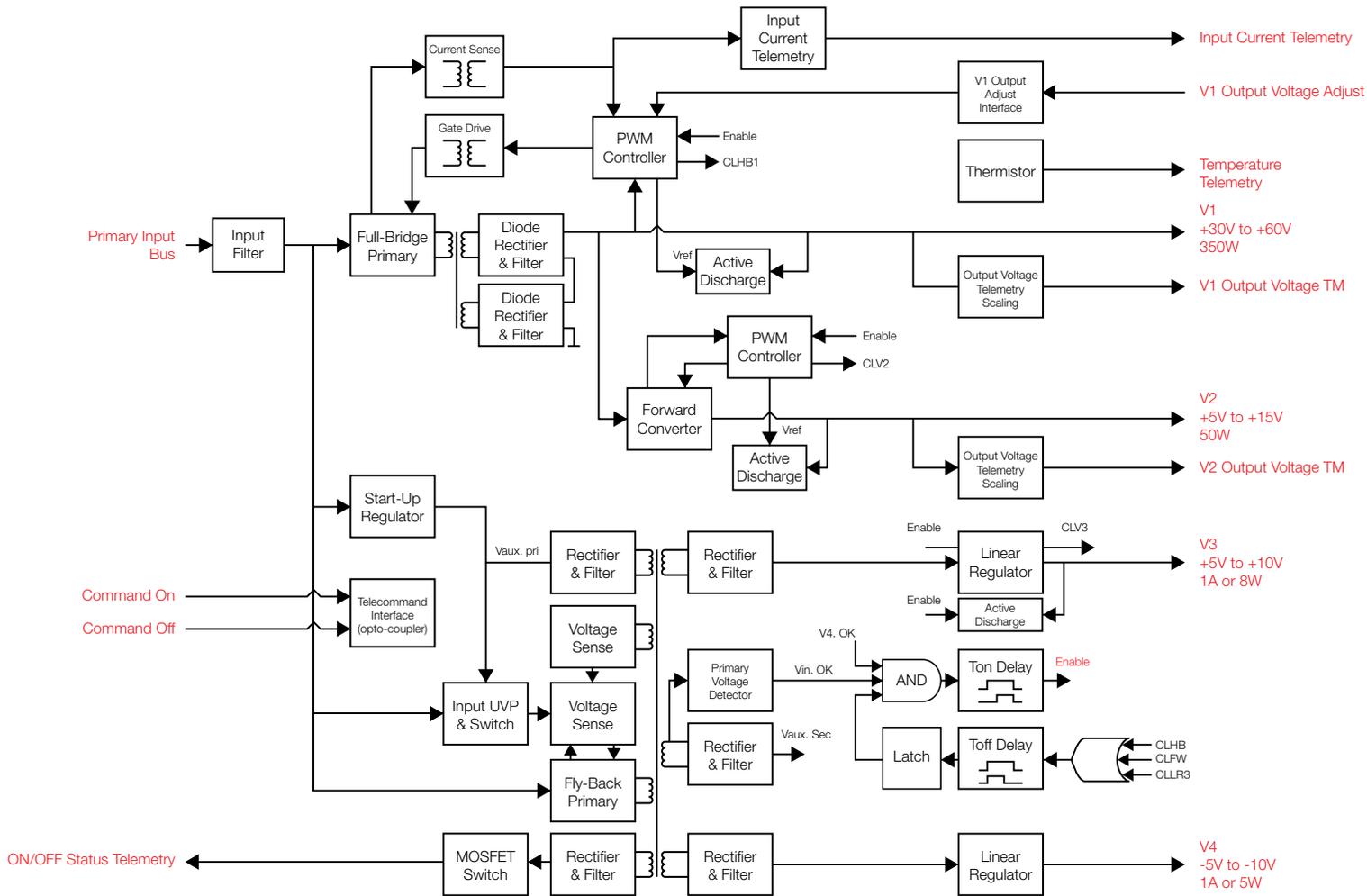
Typical Efficiency



All 4 Outputs Loaded Equal Relative to Max Load

# TPSU Series

## GENERIC BLOCK SCHEMATIC



### Flight Qualified and Export Approved Configurations

Part Number	Input Voltage	V1	V2	V3	V4
12190	98V - 101V	+50.0V / 6.50A	+6.0V / 6.50A	+9.0V/0.60A	-9.0V / 0.40A
12200	40V - 66V	+50.0V / 2.40A	+6.0V / 3.00A	+9.0V/0.60A	-9.0V / 0.40A

ECCN: 9A515.y.1

### About Micross

Micross is the most complete provider of advanced microelectronic services and component, die and wafer solutions. With the broadest authorized access to die & wafer suppliers, an extensive portfolio of hi-rel power, RF, optoelectronics, memory, data bus, logic, and SMD/5962 qualified products, and the most comprehensive advanced packaging, assembly, modification, upscreening, and test capabilities, Micross is uniquely positioned to provide unparalleled high-reliability solutions, from bare die, to fully packaged devices including hermetic ICs/MCMs, PEMs, ASICs, FPGAs, and PCBs, to complete program life-cycle sustainment. For more than 45 years, Micross has been a trusted source for the aerospace, defense, space, medical, energy, communications, and industrial markets.



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