

## TAILORED TO SPECIFICATIONS

- Fully Customizable to Match Satellite Platform and Payload Requirements
- Four Individually Regulated Low Noise Outputs: 3 Positive & 1 Negative
- Onboard EMC Filters Ensures Compliance Without Additional Filtering
- Input to Output Power Efficiency of up to 71%

## FEATURE-RICH

- Output ON/OFF Sequencing and Input Under Voltage Program
- Isolated Pulse ON/OFF Telecommand
- Telemetries: ON/OFF Status, Temperature, Output Voltage
- Automatic Shutdown of Positive Rails if the Negative Rail is Overloaded
- Low CE On Input & Output and High Input to Output CS Rejection



Micross MAHB converters offer state of the art noise performance and is specifically designed for noise sensitive RF applications. The MAHB provides excellent input to output noise suppression and the individually regulated outputs eliminates cross regulation & noise coupling.

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

### Design Expertise

Micross' design team helps review and specify payload specifics 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.

### Design Flexibility

The MAHB can be tailored to most satellite platforms and the outputs can be configured to customer specific payload requirements.

Output 1:	+2.5V to +8V	1.5A / 10W max
Output 2:	+2.5V to +15V	1A / 5W max
Output 3:	-1.5V to -15V	0.2A / 2.5W max
Output 4:	+5V to +15V	1A / 5W max

### Rapid Delivery for Tailored Designs:

- 6 Months for Engineering Models
- 9 Months for CDR Datapackage
- 12 Months for Flight Units

### Design Datapackage

- Worst Case Analysis
- Radiation Analysis
- Part Stress Analysis
- Reliability Assessment
- Thermal Analysis
- FMECA
- Mechanical Analysis
- Declared Components List
- Declared Process List
- Declared Materials List

### Product Control Documentation

- Interface Schematics
- Interface Control Drawing
- User's Manual
- Test Plan
- Acceptance Test Procedure
- EMC Test Procedure and Report
- EIDP (One for Each Deliverable Item)
- Micross Standard Product Assurance Plan
- Compliance Statement for Specification
- Configuration Status List
- SET and Loop Stability Test Reports

### Mechanical:

- PCB Outline: 85mm x 71mm x 19.5mm Excl. Connectors
- Mass: <300g

### Electrical Performance

- WC EOL Output Voltage Accuracy:  $\pm 2\%$  Including Line and Load
- Transient Response:  $\pm 5\%$  for a 50% to 100% Load Step
- Low Quiescent Current When Commanded OFF

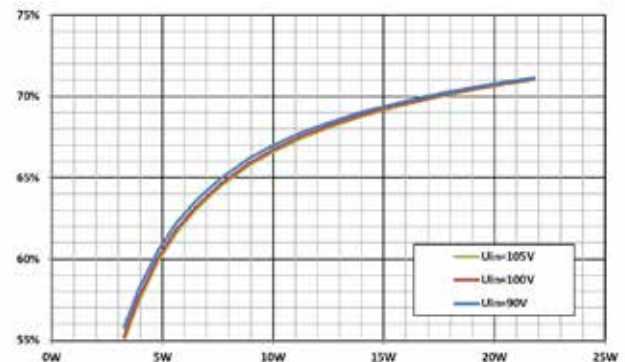
### Output CE:

- All Outputs < 1.0mVrms (50Hz to 50MHz)

### CS Rejection Input to Outputs:

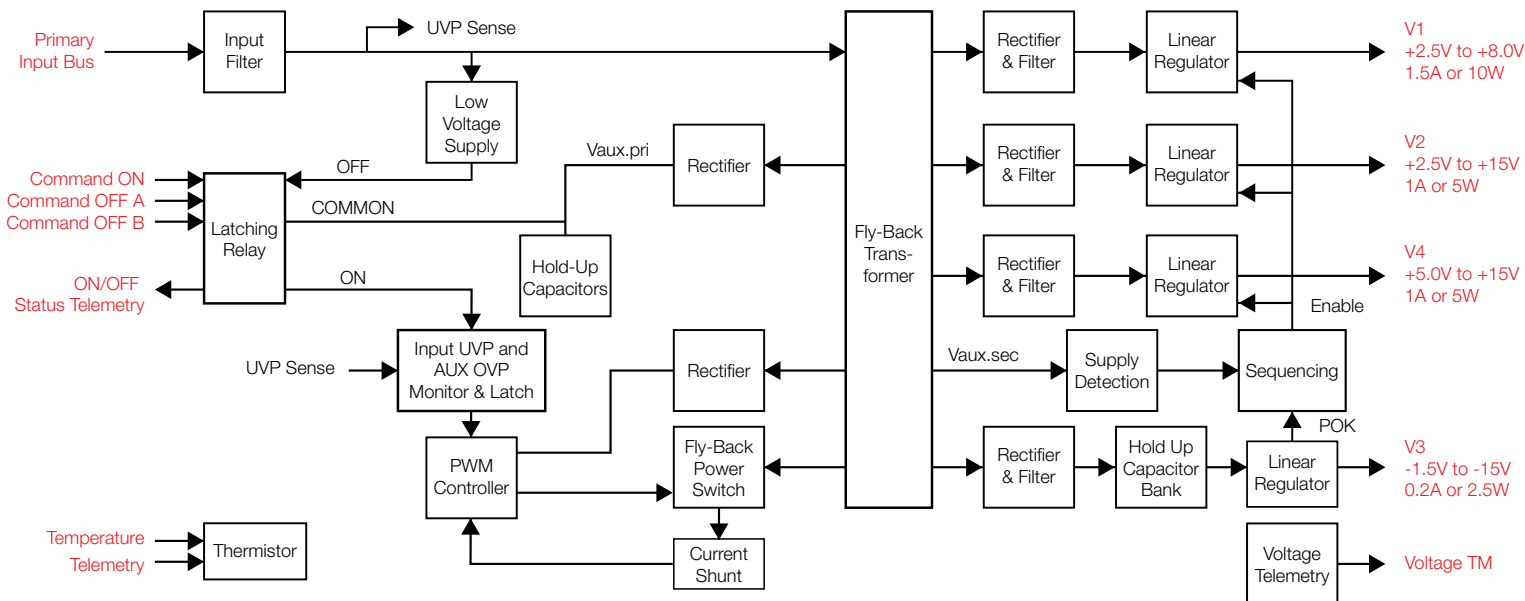
- All Outputs > 85dB

Typical Efficiency



All 4 Outputs Loaded Equal Relative to Max Load

# MAHB Series Generic Block Schematic



## Flight Qualified and Export Approved Configurations

Part Number	Input Voltage	V1	V2	V3	V4
12110	98V to 101V	+7.2 / 0.85A	+6.0V / 0.80A	-6.0V / 0.05A	+12.0V / 0.33A
12138	97V to 103V	+8.0V / 1.40A	+6.0V / 0.80A	-6.0V / 0.05A	+12.0V / 0.55A
12147	33V to 39V	+8.0V / 1.40A	+6.0V / 0.80A	-6.0V / 0.05A	+12.0V / 0.55A
12148	96V to 103V	+8.0V / 1.40A	+6.0V / 0.80A	-6.0V / 0.05A	+12.0V / 0.05A
12156	25V to 32.8V	+3.3V / 1.80A	+5.1V / 1.62A	-5.0V / -0.09A	Not Fitted
12157	31.5V to 52V	+3.3V / 1.80A	+5.1V / 1.62A	-5.0V / -0.09A	Not Fitted
12163	31.5V to 52V	+3.3V / 1.80A	+5.1V / 1.62A	-5.0V / -0.09A	Not Fitted
12169	33V to 39V	+6.0V / 1.50A	+8.0V / 1.65A	-6.0V / 0.10A	+12.0V / 0.55A
12181	98V to 101V	+7.2V / 1.40A	+6.0V / 1.40A	-5.0V / 0.05A	+12.0V / 0.55A
12186	98V to 101V	+5.2V / 0.93A	+10.1V / 1.20A	-5.4V / 0.07A	+15.0V / 0.03A
12198	22V to 35V	+6.0V / 0.80A	+8.0V / 0.60A	-6.0V / 0.05A	+12.0V / 0.10A

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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