



Micross Hi-Rel Power Solutions acts as an extension of our customers in-house design team and engages at all levels to design and manufacture the right solution for our customers.

AS9100 CERTIFIED

PRODUCT DESIGN

Micross NewSpace products build on our strong heritage in the classical space market. We use well-know circuit blocks with heritage and proven performance. Analysis and Verification is done using the same methods and tools as for our classical space products.

PROCESSING & QUALIFICATION

Use of well-known component types and qualified PCB footprint. Pure-Tin termination are used as-is while tin-lead solder is used for all soldering. The boards are conformally coated with Humiseal 1B73. Manufacturing to IPC J-STD-001H. Inspection is done according to IPC-A-610H.

GENERIC DECLARED COMPONENTS LIST

- Proven Performance and Flight Heritage
- Automotive Grade
- Hi-Rel Enhanced and COTS

PRODUCT ASSURANCE PLAN

- Project Performance and Flight Heritage
- Quality and Configuration
- Design Assurance
- Parts Selection and Space Radiation
- Materials and Processes
- Manufacturing and Testing



FEATURES INCLUDED

- EMC Filters
- Output Sequencing
- Open Board
- Solder Pads for Input/Output
- Overload Protection
- Input Under-Voltage Protection
- TID > 30kRad
- LET > 35MeV·cm²/mg

FEATURES AVAILABLE

- Ouput Voltage Adjust
- Chassis
- Converter

COMMAND & TELEMETRY

- ON/OFF Command
- Output Enable
- Input Current Telemetry
- ON/OFF Status Telemetry
- Temperature Telemetry
- Voltage Telemetry

PROTECTION FEATURES

- Output Over-Voltage Protection
- Output OR-ing for Redundancy
- Current Sharing

Applications & Features

KEY APPLICATION AREAS

Power Levels

- Ranging 5W to 500W
- Parallel Operation for Select Products

Low Power & Low Noise RF

- RF Channelizers
- Microwave Amplifiers
- Master Reference Oscillators

High Power RF

- Solid State Power Amplifiers
- Synthetic Aperture Radar
- Centralized DC-DC Converters

Digital and Mixed Signal

- On-Board Data Processing
- Command & Data Handling
- Optical Laser Communication

Power Systems

- Intermediate Bus for POLs
- Power Bus for Platform Equipment

POTENTIAL FUTURE NEWSPACE PRODUCTS

Examples	Quad Output	Dual Symmetric	Single Output
Power	75W or 165W	25W or 100W	250W or 500W
Output 1	+15V to +25.0V	+5V or +15V	+15V to +35V
Output 2	+5.00V	-5V or -15V	N/A
Output 3	+15.0V	N/A	N/A
Output 4	-15.0V	N/A	N/A

DESIGN ANALYSIS & DOCUMENTATION AVAILABLE

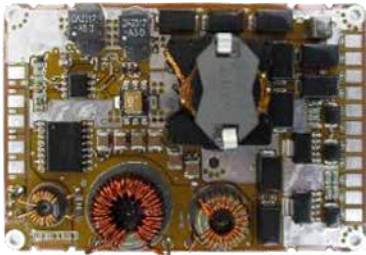
Design Data-Package

- Worst-Case Analysis
- Radiation Analysis
- Parts 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 (for Each Deliverable Item)
- Micros Standard Product Assurance Plan
- Compliance Statement for Specification
- Configuration Status List
- Loop Stability and SET Test Reports

NewSpace Product Example – Delivered 1,800 Flight Units



NSA - 22W

- Integrated Input and Output Filter
- Synchronous Rectification for Improved Efficiency
- Linear Regulators for Low Output Noise (RF Equipment)
- Peak Power Efficiency Up to 77%
- Size (LxWxH): 75.0mm x 50.0mm x 21.4mm
- Mass: 55g

Output Voltages

- Output 1: +2.45V / 4.55A / 11W
- Output 2: +3.30V / 2.00A / 6.6W
- Output 3: +5.00V / 0.75A / 3.75W
- Output 4: -5.00V / 0.10A / 0.5W

Input Voltage

- 22V to 34V (Nominal)
- 40V (Transient)
- 18V to 22V (Under-Voltage ON/OFF)

About Micros

Micros 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, Micros 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, Micros has been a trusted source for the aerospace, defense, space, medical, energy, communications, and industrial markets.



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