



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**

## MANUFACTURING

Our manufacturing line in Copenhagen is qualified up to space grade products and can be setup to match customers requirements for all types of high reliability PCB products.

Micross produce PCB products up to IPC J-STD-001H class 3 with option for Space Addendum. Inspection is done according to IPC-A-610H class 3. Our hybrids from sister company in US are available in MIL-PRF-38534 class H and K.

Our SMT line in Denmark has a capacity of approximately 900 boards per week.

## FACILITIES

Micross' Danish facilities are located in Ballerup outside Copenhagen. The 1,800m<sup>2</sup> facility houses both development and manufacturing activities in the same building.

## HERITAGE

Micross' design and manufacturing team has a strong heritage within high reliability power electronics going back 30+ years delivering application specific power supplies to all major space and defense companies.

## CAPABILITIES

- › High Capacity SMT Line for Volume Manufacturing
- › Flexible Setup for Efficient High Mix Manufacturing
- › Sister Company in the US Offering Hybrid Power Supplies

### Designed for Harsh Environments

- MIL-STD-461
- MIL-STD-704
- MIL-STD-810
- MIL-STD-1275
- MIL-PRF-38534
- MIL-HBDK-217

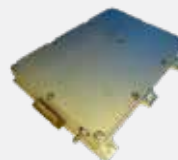
Tactical and Space Radiation Environments

### Design Capabilities

- Power/Analog R&D Engineering
- Electrical & Mechanical Design
- Engineering Lab
- Mechanical Lab
- Test Development
- EMC Testing

### Manufacturing Capabilities

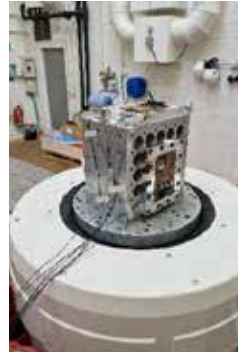
- Automated SMT Line
- Hand Solder
- Cleaning & Processing
- Component Storage
- Acceptance & Testing
- Packaging & Shipping



# Qualification & Manufacturing

## QUALIFICATION METHODOLOGY

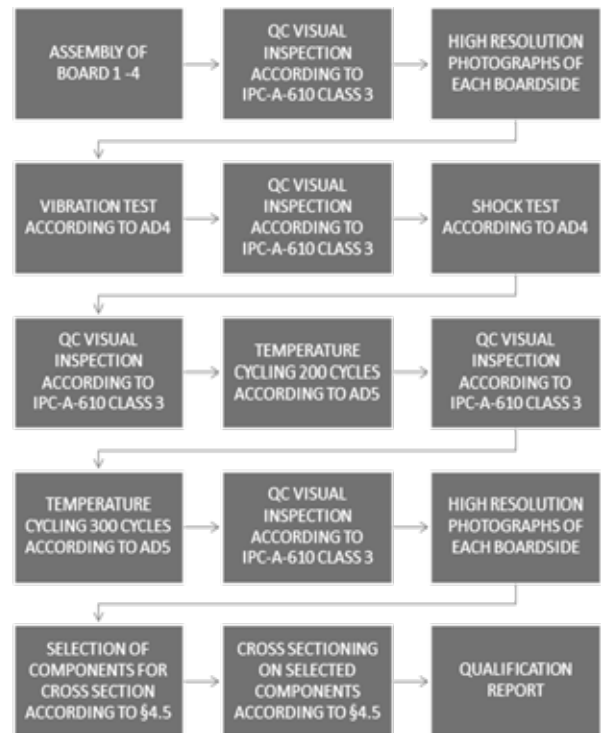
- Qualification of PCB Products is Done on Processes and Parts
- Once Qualified the Mounting of Parts are Approved for Use in Space-Grade Products
- ESA Qualification Process and Requirements is Applied for the Line Qualification
- Qualification Flow is Identical to Our Existing Manufacturing Line in San Jose, CA



## ENVIRONMENTAL TESTING

High Level Sine				
Range, Hz	Level (Peak to Peak)	Sweep Rate (Oct / Min)		
25 - 30	13G	1		
30 - 100	20G			
100 - 200	15G			
Duration: 1 Cycle Up from 25Hz to 200Hz				
Random Vibration				
Axis	Range, Hz	Level	Grms	Duration, sec
X, Y, Z	20 - 100	+6dB / Oct	33	300
	100 - 700	1SQR (G) / Hz		
	700 - 2000	-6dB / Oct		
Shock, Half Sine Test:				
1200G, 0.4ms, 18 Shock in Total (6 Shock pr. Axis)				
Temperature Cycle				
500 Cycles -55°C to +100°C				

## QUALIFICATION FLOW



## 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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