

# **Hi-Rel Power Solutions**

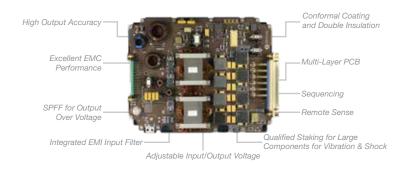
**Product Line Overview** 



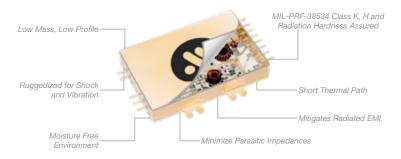
Micross Hi-Rel Power Solutions is a trusted expert in high-reliability DC-DC converters, offering a broad portfolio available in a wide range of packages for space, defense and aerospace, and other demanding environments.



# **BOARD BASED DC/DC CONVERTERS**



# HERMETIC HYBRID DC/DC CONVERTERS



- Application Specific RF and Digital enabling Seamless Integration
- · Outputs from 1V to 60V, Covering Digital to GaNRF Voltages
- Input Under Voltage Protection and Output Protection for Over Voltage and Short Circuit
- · User Adjustable Output Voltage and Active Current Sharing
- Custom Designed Magnetic Core and Bobbin to Ensure Best Match to Actual Application Needs
- · SCD Controlled EEE Parts
- · Product Outputs Range from Single Output Up to Eight Outputs
- · Radiation Hardened: >100 kRad, 60 MeVcm2 / mg
- · Generic PCB Platform Approach for Fast-Turn Delivery
- Radiation Hardened: > 200 kRads and LET up to 82 MeV-cm2/mg
- · Guaranteed EOL Performance... Critical for Long-Term Missions
- · Overload, Short-Circuit and Under Voltage Protection
- · Single, Dual and Triple Outputs with Adjustable Output Voltage
- · Magnetically Coupled Feedback
- · Built to Withstand -55°C to +125°C (without De-Rating)
- · Compact, Low Profile Design fits any Specification or Custom Need
- · Minimized Electromagnetic Interference, via Internal EMI Filters

### **HI-REL EMI FILTERS**

Complementary to our hermetic hybrid DC-DC converters, Micross Hi-Rel Power Solutions' high-reliability and space EMI filters are designed for MIL-STD-461 compliance. Our EMI filters are manufactured on a fully qualified MIL-PRF-38534 line and offered in a range of input voltages and packages. US DoD DLA QPLs are also available.

# CLASS K DC-DC CONVERTERS

Space-Grade MIL-PRF-38534 Hermetic Hybrid Converters, 5-120W



LSO Series (30W)

· Available with Telemetry & Over-voltage Protection (LSO)

Integrated 461 Filter

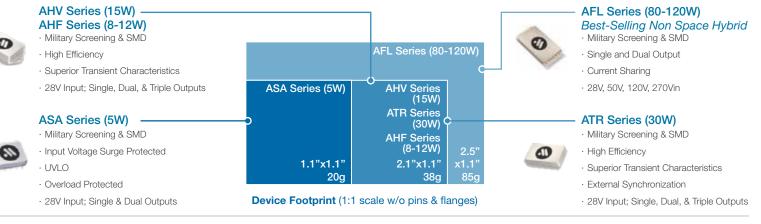
#### · Output Voltage as Low as 1.5V LS Series (30W) LSO Series (30W) M3GB Series (40W) C M3GB Series (40W) · Integrated 461 Filter Best-Selling Isolated Converter Output Voltage as Low as · Single, Dual, & Triple Output 1.5V **GH Series** · Integrated MIL-STD-461 Filter LS Series (30W) · 28V, 50V, 70V, 120Vin S Series (10W) S Series (30W) Compact GH Series (50W) ARA Series (5W) Output Voltage as Low as 1V External MIL-STD-461 Filter Available First Hybrid Space Converter with Synchronous Rectification · Best in Class Efficiency New ARA Series (5W) · Bus Converter for DPA Compact, Light, SMT 1.1"x1.1" 1.7"x1.3" 2.3"x1.5" 3.0"x2.0" 28V & 100Vin 13g 50g 80g GHP Series (120W) External MIL-STD-461 Filter

Device Footprint (1:1 Scale, without Pins & Flanges)

Highest Power Density 40W/in<sup>3</sup> · 28V, 120Vin

# CLASS H DC-DC CONVERTERS

MIL-PRF-38534 Hermetic Hybrid Converters, 5-120W



Model O/P Power Size (mm)

# CUSTOM PCB DC-DC CONVERTERS

Micross PCB Platforms can be Tailored to Customer Specification on Both Input & Output

speelineation on Beth input a Output						
Zxxx Series (180-325W)	_	MLN	2	5W	50 x 60	<
Single Output		MAS	3	15W	50.8 x 85	<
· High Output Current (to 60A)		MAHB	4	20W	71 x 85	<
Low Output Voltage (to1V)		MBH	3	25W	68.5 x 105	<
· Remote Sense		EAL	4	75W	80 x 142	<
· High Efficiency		EARB	3	130W	65 x 155	<
Cold Redundancy		EARC	3	170W	84 x 155	<
Complete Unit in Chassis (ZXR)		EART	3	140W	84 x 155	<
		EGB	3	210W	95 x 153	<
Programmable Current Source (ZAC) for Optical Inter-satellite Links		EADP	4	200W	103 x 171.5	<
TPSUx Series (400-500W)		EBS	1	400W	32 x 227	<
· Up to 7 Outputs		ZB	1	250W	100 x 150	<
· Support Pulse-Load (Radar)		ZAR	2	100W	20.6 x 161.9	<
Output Sequencing		ZBR	1	180W	20.6 x 161.9	<
· High Efficiency		ZAC	1	325W	100 x 254	<
Pulsed Radar (SAR) Applications		TPSU	4	400W	120 x 180	<
Complete Unit in Chassis (TPSUR)		TPSUR	7	500W	165 x 338	<
· Complete Unit in Chassis (TFSUR)						

**EMEA** 



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### **Need Information?**

Quote Request:	micr
General Requests:	micr
Technical Support:	micr

ross.com/quotes ross.com/info micross.com/tech-support

Weight

<40g

:200g

200g

285g

900g

350g

:520g

- · Linear Post Regulators, All O/P
  - · Low Noise, High CS Rejection Output Sequencing
    - · Low Power RF, LNA, MRO, etc.

Mxxx Series (5-25W) · Up to 4 Outputs

· Isolated Pulse Command I/F · EMI Input Filter

## Exxx Series (75-210W)

- · Up to 4 Outputs
- · High Efficient Main Output(s)
- · Linear Post Regulators, All O/P
- · Output Sequencing
- · RF Amplifiers (Tx) GaAs and GaN
- · Isolated Pulse Command I/F
- EMI Input Filter

#### EBx Series (200-400W)

- Single Output
- · Complete Unit (Chassis)
- · For Hot Redundant Systems · Isolated Bus Converter (~28 Volt)
- · Parallel Operation (Current Sharing