


# HI-REL BUSINESS | NEW SPACE

Manufacturers	Products	Applications
	<p>EPC Space is focused on designing and manufacturing radiation hardened (Rad Hard) GaN-on-silicon transistors and ICs packaged, tested, and qualified for satellite and high-reliability applications. Built for mission-critical environments, EPC Space's GaN technology guarantees high power density, fast switching, and superior radiation tolerance, making it the ideal choice for spaceborne and high-reliability electronics.</p> <p>Products: JANS MIL-PRF-19500 Certification for Rad-Hard GaN-on-Silicon transistors and ICs, Rad-Hard GaN Packaged HEMTs, Rad-Hard GaN Die on Ceramic Adapter, Rad-Hard GaN Drivers &amp; Power Stage Modules, Rad-Hard GaN Drivers &amp; Power Stage ICs</p> <p>Available engineering tools: Demonstration Boards, Point-of-Load Evaluation Boards, Motor Drive Evaluation Boards</p>	<p>Space High-Efficiency DC/DC Converters, Space Systems Lidar, Space Motor Drives, Space Systems - Ion Thrusters, Low Earth Orbit (LEO), Geostationary Earth Orbit (GEO)</p>
	<p>Rad-hard space qualified optocouplers &amp; optoelectronic components, high gain-, high speed-, high voltage optocouplers, VCSEL high power laser diodes, rad-hard &amp; military solid-state relays, voltage regulators, ITAR free products, Rad-Hard Power MOSFETs, N-Channel, P-Channel, Combination N++ P-Channel</p>	<p>Space Heritage, New Space, Aerospace, Avionics</p>
	<p>Military hermetic hybrid DC/DC-converters 5W to 120W, single, dual, triple versions            Space rad-hard hermetic hybrid DC/DC-converters 5W to 120W, single, dual, triple versions, TID 100krad, SEE 82MeV            MIL-PRF-38534 DLA qualified, SMD part number available            New space rad tolerant hermetic hybrid DC/DC-converters 25W, 40W, single, dual versions, TID up to 30krad, SEE up to 60MeV            EMI filters complementary to their hermetic hybrid DC/DC-converters offering a range of input voltages and packages            Rad-hard and Rad-tolerant PCB based DC/DC-converters with key features and tailored to customer's requirements, single, dual, triple, quad, octo versions, Output power 5W to 400W, TID 100krad, SEE 60MeV</p> <p><b>Space Components</b>            Rad-hard &amp; rad tolerant MRAMs 64Mb (4Mx16) class S 100K            Radiation hard logic ICs (AND, NAND, OR, XOR),            Hi-Rel diodes, rectifier &amp; Schottky diodes, unipolar &amp; bipolar TVS diodes, Zener diodes, COTS diodes, Diode assemblies - ISOPAC®, center taps and doublers,            Hi-Rel ICs &amp; components DLA/DSCC certified products, QML/SMD 5962, memories, logic devices, analog ICs            Nuclear Event Detector (NED) screened to class H military flow or class K space flow            MIL-STD-1553 data bus couplers &amp; accessories</p>	<p>Space, New Space, Defense, Aerospace, Aviation, Marine, Launch Vehicles, Industrial-Embedded Products, FPGA-Boards</p>
	<p>Quantic Eulex develops innovative ceramic components for the most demanding high-frequency microwave, millimeter-wave, and 5G applications. The solutions deliver design advantages through small-footprint, low-profiling packaging, and a wide voltage range, fully tested up to 67Ghz. At temperatures ranging from ranging from -55° to 125°C.</p> <p>Patented High-Frequency Ceramic Capacitors single-layer ceramic capacitors Broadband Capacitor, Eulex Gap Capacitor, Single Layer Binary Capacitor, Vertical Layer, Ultra High-Q MLCC, Substrates and Stand-Offs</p>	<p>Hi-Rel applications, high-frequency microwave, millimeter-wave, 5G applications</p>

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	<p>Highest energy and power density capacitors with MTBF&gt;5,000,000 hours, product range 22 to 1,000,000 <math>\mu</math>F (5.5 to 150V) -55°C to +200°C very low ESR, very high current handling capability, highest levels of quality, Qualified to NASA INST-002, ISO 9001 and AS9100 registered, MIL-STD-704 space grade capacitors for critical missions</p>	<p>Space, New Space, Power Hold-up Avionics, Satellite Thrusters, Radar Lidar, EMP and Laser, Oil &amp; Gas</p>
	<p>Multi-layer Polymer (MLP) Film Stacked Capacitors It's branded capacitor products include Capstick® Capacitor (lead-frame capacitor), Surfilm® Capacitor (surface mount chip capacitor), Quencharc® Capacitor (RC network snubber capacitor), and the Angstor® Capacitor line.</p> <p>New Angstor series: 1200 VDC high-voltage polyester capacitors, withstand high current ripples, self-repairing, ultra-low ESR/RSL</p>	<p>Military, Space, Commercial, Automotive, Telecom Mission-critical</p>
	<p>Multilayer ceramic capacitors (MLCCs) and leaded devices. Surface mount (SMT) multi-layer ceramic chips capacitors in both custom and EIA standard sizes; switch mode power supply (SMPS) capacitors in accordance with MIL-PRF-49470 and DSCC/DLA 87106, 88011 drawings and customer source controlled drawings (SCDs); SMT high voltage MLCC; radial leaded high voltage capacitors; SMD large body size MLCC; discoidal capacitors; discoidal arrays; and custom molded case radial parts.</p> <p>SMPS family for input and output filters in switch-mode power supplies DH Series: negative dielectric energy pulse capacitors, +250°C, 10 KV</p>	<p>Defence, Aerospace, Hi-Rel applications, Industrial, Telecommunications Missiles Downhole</p>
	<p>ESCC FM, QM, EM qualified rad-hard POL converter 2A, 24V flatpack, buck-boost operation, rad-hard POL converter 8A, 40V (prototype), Voltage clamp 10A, 40V, DC/DC-converter controller, PWM controller with start-up, quad LVDS line receiver with extended common mode, quad LVDS line driver, 1:4 LVDS fanout buffer with extended common mode, Screening &amp; testing of SPACE IC products to the ESCC 9000 requirements, Rad-tolerant POL converter in a plastic package</p>	<p>Space, New Space, Satellite Business, Harsh Environments</p>
	<p>Space &amp; military MIL-PRF-55342 thin &amp; thick film SMT chip resistors, MIL-PRF-914 SMT chip resistor networks, MIL-PRF-32159 zero Ohm chip resistors (jumpers), Mission critical precision chip resistors, high frequency chip resistors, silicon chip resistors, SMT fixed chip attenuators, 4-terminal current sense chip resistors, High power chip resistors, high voltage chip resistors, wire &amp; epoxy bondable chip resistors for hybrids, power moisture compliant chip resistors, Hi-Rel screening</p>	<p>Space, New Space, Defense, Aviation Hybrid Modules, Biomedical</p>
	<p>VPG Foil Resistors' unique, ultra-precision Bulk Metal Foil resistor products provide an extremely low temperature coefficient of resistance (TCR) and exceptional long-term stability through temperature extremes.</p> <p>VPG Foil Resistors is comprised of four brands (VFR, Alpha Electronics, Powertron and APR). They design and manufacture the widest selection of highly precise and reliable precision resistors from customized made-to-order to standardized made-to-stock that meet any required specifications.</p> <p>Products: High Precision Foil Resistors, Standard &amp; Custom Resistors, Currents Sense-, Power-, SMD-, THT-, Thermosensitive Resistors, Hybrid Chips (PRND), Trimmers, Voltage Divider Networks</p>	<p>Space Qualified Resistors, Aviation, Aerospace, Defence, Downhole Oil &amp; Gas</p>
	<p>Hi-Rel &amp; High Temperature Hybrid Microcircuit Crystal Oscillators &amp; Crystal Units, LVDS Output Oscillators for Space Applications, MIL-PRF-55310, MIL-PRF-38534, MIL-883B, TTL-LVDT-CMOS-HC/ACMOS-ECL, Lowest voltage is 1.8V, SMD-Packages 5x7mm, High Shock &amp; Vibration Designs, Extreme High temperatures products operating up to +230°C New Commercial Space Oscillators for LEO Applications, SMD-Packages 3x5mm</p>	<p>Space Heritage, New Space, Aerospace, Aircraft, Defense, High Temperature Products</p>