

Low On-Resistance, High Current 200 V & 300 V Rad-Hard Gallium Nitride Devices Increase Power Density for Space

EPC Space introduces two new radiation-hardened (rad-hard) gallium nitride (GaN) devices in the high current "G-package" family.

EL SEGUNDO, CA, UNITED STATES, August 29, 2023 /EINPresswire.com/ -- [EPC Space](#) announces the introduction of two new rad-hard GaN transistors with ultra-low on-resistance and high current capability for high power density solutions that are lower cost and more efficient than the nearest comparable radiation-hardened silicon MOSFET. These devices come packaged in hermetic packages in very small footprints.

Part Number	Drain to Source Voltage (V _{DS})	Drain to Source Resistance (R _{DS(on)})	Single-Pulse Drain Current (I _{DM})
EPC7019G	40 V	4 mΩ	530 A
EPC7018G	100 V	6 mΩ	345 A
EPC7020G	200 V	14.5 mΩ	200 A
EPC7030G	300 V	32 mΩ	200 A

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The G-Package family offers the lowest on-resistance of any packaged rad hard transistor currently on the market.”

Bel Lazar, CEO of EPC Space

The EPC7020G is a 200 V, 14.5 mΩ, 200 Apulsed radiation-hardened gallium nitride transistor and the EPC7030G is a 300 V, 32 mΩ, 200 Apulsed radiation-hardened gallium nitride transistor. These devices join the 40 V, 4.5 mΩ EPC7019G and the 100 V, 4.5 mΩ EPC7018G to cover applications including [power supplies](#) for satellites and space mission equipment, [motor drives](#) for robotics, instrumentation and reaction wheels, and deep space

probes. This product family comes packaged in a compact hermetic package in a footprint less than 45 mm².

With higher breakdown strength, lower gate charge, lower switching losses, better thermal conductivity, and lower on-resistance, power devices based on GaN significantly outperform silicon-based devices and enable higher switching frequencies resulting in higher power densities, higher efficiencies, and more compact and lighter weight circuitry for critical spaceborne missions.

“The G-Package family offers the lowest on-resistance of any packaged rad hard transistor currently on the market,” said Bel Lazar, CEO of EPC Space. “These devices offer mission-critical components with superior figure of merit, significantly smaller size, and lower cost for the space and other high-reliability markets than alternative rad hard silicon solutions”.

Price & Availability

Contact factory for price, availability, and delivery.

About EPC Space

EPC Space provides revolutionary high-reliability radiation hardened enhancement-mode gallium nitride power management solutions for space and other harsh environments.

Radiation hardened GaN-based power devices address critical spaceborne environments for applications including power supplies, light detection and ranging (lidar), motor drive, and ion thrusters.

eGaN is a registered trademark of Efficient Power Conversion Corporation, Inc.

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The advertisement for EPC Space features a dark space background with a view of Earth's horizon. In the upper left, a small satellite is visible. The EPC Space logo is prominently displayed in blue. Below the logo, two gold-colored GaN power devices are shown, one above the other. To the right, a larger satellite with solar panels is depicted. The text 'Rad-Hard GaN Power Devices Increase Power Density for Demanding Space Applications' is written in white. At the bottom, a caption reads 'Rad Hard GaN FETs Increase Power Density for Demanding Space Applications'.

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**Rad-Hard GaN Power Devices
Increase Power Density for
Demanding Space
Applications**

Rad Hard GaN FETs Increase Power Density for
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