

NEWS RELEASE

Power Integrations Supports Electric Vehicle Designs with New AEC-Q100 Certified 900 V InnoSwitch3-AQ Flyback Switcher ICs

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InnoSwitch3-AQ ICs are up to 90% efficient with low 15 mW no-load power consumption and increased voltage margin for 400 V and 800 V batteries

SAN JOSE, Calif.--(BUSINESS WIRE)-- **Power Integrations** (Nasdaq: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today announced that its automotive-qualified **InnoSwitch™3-AQ** flyback switcher IC family is now available with a member rated to 900 V, providing greater headroom for 400 V and 800 V electric vehicle inverter, battery management and climate control applications. The InnoSwitch3-AQ family combines primary and secondary controllers plus safety-rated feedback circuitry into a single IC. This allows accurate output voltage regulation, low component count and configuration options for operation over the ultra-wide input voltage range of 30 V to 1200 V.

Power Integrations Supports Electric Vehicle Designs with New AEC-Q100 Certified 900 V InnoSwitch3-AQ Flyback Switcher ICs. InnoSwitch3-AQ ICs are up to 90% efficient with low 15 mW no-load power consumption and increased voltage margin for 400 V and 800 V batteries. (Graphic: Business Wire)

Edward Ong, Senior Product Marketing Manager at Power Integrations said: "New 400 V system designs for electric vehicles require higher

operating voltages to account for fault conditions and transients. The new 900 V INN3996CQ ICs provide plenty of voltage headroom and meet the Automotive Electronics Council strict requirements for qualification ensuring safe and reliable operation in the demanding automotive application. Using a StackFET approach, the new device is suitable for 900 V and greater bus designs."

The constant voltage (CV) regulated AEC-Q100-qualified InnoSwitch3-AQ switcher ICs achieve up to 90% efficiency across the load range and consume less than 15 mW under no-load conditions. Output power is up to 20 W at 85 °C ambient temperature and 400 VDC input for the 900 V family. Devices incorporate a multi-mode Quasi-Resonant (QR) / CCM / DCM flyback controller, 900 V switch, and Power Integrations' high speed FluxLink communications link that enables accurate regulation in the compact InSOP24 package and provides reinforced isolation up to 5500 m altitude. InnoSwitch3-AQ ICs operate down to 30 VDC, enabling automotive designers to use the device in traction inverter emergency power supply applications.

InnoSwitch3-AQ family devices include multiple protection features for automotive applications including input over-voltage and under-voltage protection, output over-voltage and over-current limiting, and over-temperature shutdown.

Availability & Resources

A new design reference, **DER-889Q**, is available that describes a 15 W power supply that supports 30 VDC to 1200 VDC input and 12 V / 1.25 A output. Another resource, the 30 VDC to 921 VDC **DER-859Q** describes the operation of InnoSwitch3-AQ in 800 V bus applications delivering up to 30 W. Both designs employ PI's StackFET technology. The additional circuitry may be omitted for 400 VDC designs. The new InnoSwitch3-AQ INN3996CQ ICs are priced at \$2 in volume product quantities. For further inquiries contact a Power Integrations sales representative or one of the company's authorized worldwide distributors: **Digi-Key**, **Farnell**, **Mouser**, and **RS Components**.

About Power Integrations

Power Integrations, Inc. is a leading innovator in semiconductor technologies for high-voltage power conversion. The company's products are key building blocks in the clean-power ecosystem, enabling the generation of renewable energy as well as the efficient transmission and consumption of power in applications ranging from milliwatts to megawatts. For more information, please visit www.power.com.

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