power integrations

NEWS RELEASE

Power Integrations Introduces InnoSwitch5 Offline Flyback Switcher IC

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Zero-voltage switching (ZVS) flyback topology and advanced SR FET control enable 95 percent efficiency, reduce power supply size and component count

SAN JOSE, Calif.--(BUSINESS WIRE)-- **Power Integrations** (NASDAQ: **POWI**), the leader in high-voltage integrated circuits for energy-efficient power conversion, today announced the release of the **InnoSwitch™5-Pro** family of high-efficiency, programmable flyback switcher ICs. The single-chip switcher achieves over 95 percent efficiency with a novel secondary-side control scheme which achieves zero-voltage switching (ZVS) without a dedicated and costly additional high-voltage switch. The new IC, which features a 750 V or a 900 V PowiGaN™ primary switch, primary-side controller, FluxLink™ isolated feedback and secondary controller with an I2C interface, optimizes the design and manufacture of compact, highly efficient single- or multi-port USB PD adapters. Applications are notebooks, high-end cellphones and other portable consumer products, including designs that require the new USB PD EPR (Extended Power Range) protocol.

Power Integrations Introduces InnoSwitch5-Pro Offline Flyback Switcher IC (Photo: Business Wire)

Adnaan Lokhandwala, senior product marketing manager at Power Integrations, said: "The combination of ZVS and GaN is power supply magic. Switching losses vanish, and we can leverage the low conduction losses of GaN to implement super dense adapter layouts with far fewer components than asymmetric half-bridge (AHB) circuits or active clamp alternatives. For example, we have demonstrated 140 W / 28 V USB PD adapters in 4.2 cubic inches using only 106 components. The flyback topology used by InnoSwitch5-Pro ICs is much easier to implement than AHB and can also operate from universal mains with or without a PFC stage.”

InnoSwitch5-Pro flyback switcher ICs feature lossless input line voltage sensing on the secondary side for adaptive

DCM/CCM and ZVS control to maximize efficiency and simplify design across line and load. The ICs also feature a post-production tolerance offset to facilitate accurate output constant-current (CC) control of better than two percent to support the UFCS protocol. Excellent efficiency – better than 95 percent – allows designers to eliminate heat sinks, spreaders and potting materials for thermal management, further reducing size, weight, component cost and manufacturing complexity.

Key markets for the InnoSwitch5-Pro family of flyback switcher ICs include high-density USB PD 3.1 Extended Power Range (EPR), UFCS and multi-protocol adapters, notebook adapters and after-market single- and multi-port chargers and adapters.

Availability & Resources

Pricing for InnoSwitch5-Pro devices starts at $2.40 for 10,000-unit quantities. For further information, contact a Power Integrations sales representative or visit **power.com**.

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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