Point-of-load voltage regulators serve computing and consumer applications

International Rectifier today announced the expansion of its SupIRBuck family of integrated point-of-load (POL) voltage regulators. The new IR347x and IR386x devices for energy-efficient computing and consumer applications feature hysteretic constant on-time (COT) modulators with adaptive dead-time control to achieve superior light load and full load efficiency.

The IR347x and IR386x SupIRBuck family, which integrates a high performance controller with optimized power MOSFETs in a slim 4x5 mm or 5x6 mm PQFN package, is designed with a 0.5 V, 1 percent accurate internal reference voltage, allowing very low and precise output voltage programmability. The new products offer a rich set of features including over-temperature protection, thermally compensated over-current protection, over- and under-voltage protection, pre-bias start-up, power good output, and enable input with voltage monitoring capability.

“With its ease-of-use, scalability and high efficiency, IR’s new COT SupIRBuck family is ideally suited to applications that are required to maximize battery life or must comply with ENERGY STAR guidelines,” said John Lambert, IR’s POL products marketing manager, Enterprise Power Business Unit.

The IR347x family is capable of up to 27 V input voltage and available in a 4x5 mm and 5x6 mm PQFN package to cover a broad range of loads from 6 A to 15 A, making it easily scalable to meet optimal price and performance requirements. These options and excellent light load efficiency make the IR347x an ideal choice for power conversion in mobile applications such as laptop computers. Other applications for the IR347x family include light industrial and battery-based

applications that operate from 24 V rails.

The IR3863 and IR3865, available in a 4x5 mm PQFN package, are optimized for 12 V input applications such as laptop computers including those designed with the recently announced second generation Intel Core processor family. In addition, the new SupIRBuck devices are well suited to consumer DC-DC applications including printers, LCD TVs, and game consoles.

Specifications

Part Number	Iout Max (A)	Package	Vin Range (V)	Vout (V)	Sw Freq Range (kHz)	Features
IR3473	6	4 x 5mm QFN	3 – 27	0.5 – 12	Up to 750kHz	0.5V Ref, 1% Accuracy, Pre-Bias Start Up, Thermal Protection, Thermally Compensated OCP, OVP, UVP, SS, PGOOD, Enable
IR3475	10					
IR3476	12	5 x 6mm QFN				
IR3477	15					
IR3863	6	4 x 5mm QFN	3 – 21			
IR3865	10					

Design Tools

Datasheets are available on the International Rectifier website at www.irf.com. The IRDC3473, IRDC3475, IRDC3476, IRDC3477, and IRDC3863 and IRDC3865 SupIRBuck reference designs featuring the new devices are also available.

Price and Availability
Pricing ranges from US $1.10 for the IR3473 to US $1.75 for the IR3477 each in 10,000-unit quantities. The IR3863 costs US $ 1.25 and the IR3865 costs US $ 1.50 each in 10,000-unit quantities. Pricing for the IRDC347x and IRDC386x SupIRBuck reference designs is US $29.99 per kit. Production orders are available immediately. Prices are subject to change.

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