

100V N-Channel MOSFET for Quick Charge and USB PD Synchronous Rectification

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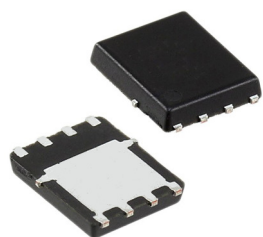


San Jose, California, December 1, 2016, Analog Power today released a MOSFET optimized for synchronous rectification in USB PD and Quick Charge chargers/travel adapters. The new device uses Analog Power’s new 100-V N-Channel process to give dramatically better figure of merit than prior devices.

The 100-V, 10-milliohm N-Channel AMR416N is designed for synchronous rectification in circuits with output voltages of approximately 9-V to 24-V. The on-resistance is suitable for loads up to about 10A, with very high efficiencies in 2 to 5 Amp range. The MOSFET also has a low on-resistance rating at a gate-source voltage of 4.5V, allowing its use with ICs that operate at 5-V. The AMR416N’s DFN5x6 package is the preferred package for synchronous rectification due to its efficient footprint and excellent thermal impedance. Although the product was designed for new generation travel adapters/chargers, it has applications in PoE, USB power strips and notebook PC and tablet AC adapters/chargers.

“USB PD and Quick Charge have become the new standard for charging all cell phones.” said Howard Chen, Analog Power’s head of marketing, “USB 5-V is not good enough for a phone bought today and due to the higher voltages used for charging, the voltage ratings required for the synchronous rectifier MOSFETs have also gone up. But designers need the higher voltage ratings without increases in on-resistance and gate charge, so we have released this new product with low on-resistance and reduced gate charge and therefore an improved figure of merit compared with our prior 100-V devices, creating a high-efficiency solution for synchronous rectification.”

Part	Type	V _{DS} Max V	V _{GS} Max V	R _{DS(on)} m Ω @ V _{GS} =		I _D Max A	P _D W	Package
				10-V	4.5-V			
AMR416N	N	100	20	10	12	18	5	DFN5x6 (SOIC-8PP)



Samples and production quantities of the AMR416N are available now, with lead times of 12 weeks for large orders. For more information see www.analogpowerinc.com

Founded in 2002 in San Jose, CA, USA, Analog Power is a leading manufacturer of Power MOSFETs. It produces not only a complete line of N- and P-channel MOSFETs from 20V to 800V, but also application specific MOSFETs that facilitate smaller and higher performance end products. Using tier-1 wafer foundries and assembly and test outsourcing, Analog Power provides the quality and reliability levels of market leaders, yet remains dynamic and customer-driven.

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