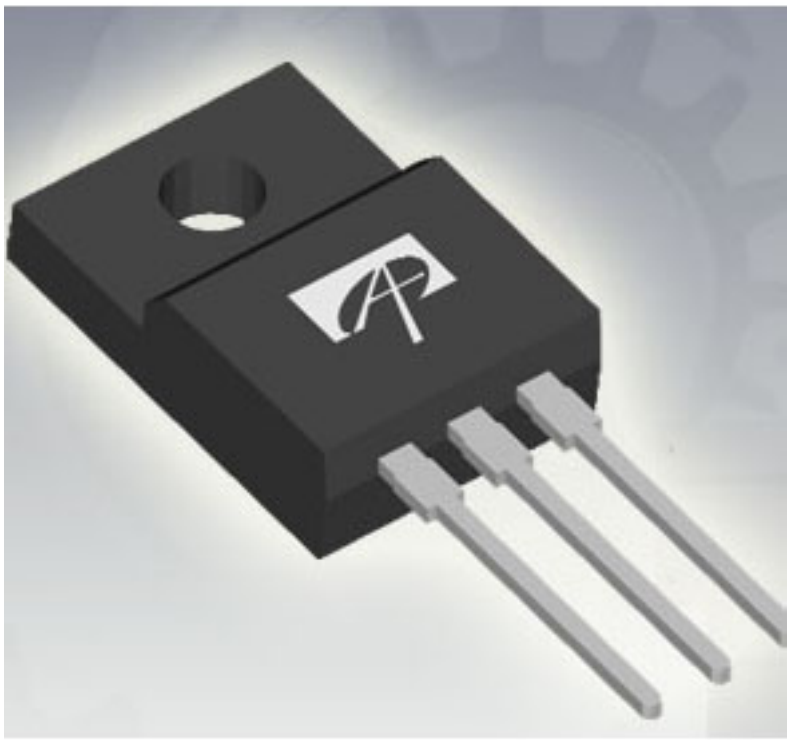
MOSFET family ideal for high-voltage applications



Alpha and Omega Semiconductor Limited [1] introduced the AOTF11C60 [2] and AOTF20C60 [3], 600V MOSFETs with AlphaMOS II technology. The AlphaMOS II (a patent pending proprietary structure and process) combines planar-like robustness and controlled switching characteristics with the low on-resistance performance of super-junction type devices. The AOTF11C60 and AOTF20C60 are ideally suited for high-voltage applications where reliability and performance are critical. Such applications include server, telecom and networking power supplies, uninterruptable power supplies, solar inverters, industrial motor control systems, and LED lighting.

AOS's new AlphaMOS II technology offers a simplified manufacturing process without compromising the core performance of the MOSFET. The AOTF11C60 and AOTF20C60 offer significant improvement in UIS capability over super-junction. Additionally the new family has been optimized for low noise operation and high efficiency by fine tuning the switching parameters. Their low $R_{DS(ON)}$, C_{iss} and C_{rss}, make the new MOSFETs perfectly suited for designs that require high efficiency, robustness and reliability.

AOTF11C60 Technical Highlights

- 600V N-channel MOSFET
- $R_{DS(ON)}$ < 0.4 Ohms max at V_{GS} = 10V
- C_{OSS} = 108 pF typ
- Q_g (10V) = 30 nC typ

AOTF20C60 Technical Highlights

- 600V N-channel MOSFET
- $R_{DS(ON)}$ < 0.25 Ohms max at V_{GS} = 10V
- C_{OSS} = 190 pF typ
- Q_g (10V) = 52 nC typ

Pricing and availability

The AOTF11C60 and AOTF20C60 100% Rg and UIS tested and are housed in Halogen Free RoHS compliant TO-220F packages. The devices are immediately available in production quantities with a lead-time of 12 weeks. The unit price for 10,000 pieces is $0.925 and $1.54, respectively.

For more information, please visit www.aosmd.com [4].

Source URL (retrieved on *07/23/2014 - 11:29pm*):
http://www.ecnmag.com/product-releases/2013/02/mosfet-family-ideal-high-voltage-applications?qt-most_popular=0

Links:
[1] http://www.aosmd.com/
[2] http://www.aosmd.com/res/data_sheets/AOTF11C60.pdf
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