Power module includes fast switching performance

Alpha and Omega Semiconductor today announced the release of AON6290 [1], the flagship device in its new 100V AlphaMOS (aMOS) medium voltage portfolio. The new product expands AOS' medium voltage MOSFET portfolio and enhances its solutions for high performance power supplies. The AON6290 is well suited for a wide range of applications that are pushing the limits of efficiency such as secondary side synchronous rectification in DC/DC and AC/DC converters, primary side and secondary side switching in telecom and industrial DC/DC converters, and POL modules for telecom systems.

AON6290 combines industry-leading on-resistance with fast switching performance. The on-resistance of this device is 68% lower than the previous generation of products and is 5% lower than the leading 100V device found in the market today. Furthermore, AON6290 delivers excellent switching performance with key figure-of-merits for $R_{DS(ON)}$* Q_g, $R_{DS(ON)}$* C_{ISS} and $R_{DS(ON)}$* C_{OSS} that are 5%, 3%, and 50% better than the current leading competitor, respectively. The benefit of this performance is that power supply designers do not need to compromise switching performance in order to reap the benefits of low on-resistance. These devices are available in a compact size DFN5x6 green package and are 100% Rg and UIS tested.

“Switching and conduction performance both need to be optimized in power designs in order to maximize total system efficiency.” said Stephen Chang, Sr. Product Marketing Manager at AOS. “AON6290 delivers the best of both worlds with industry-leading $R_{DS(ON)}$ in combination with low gate charge, input capacitance, and output capacitance.”

AON6290 Technical Highlights

- 100V N-channel MOSFET in a DFN5x6 package
- $R_{DS(ON)}$ typical = 3.8mOhms (lowest in industry)
- $R_{DS(ON)}$ < 4.6 mOhms at V_{GS} = 10V
- C_{OSS} = 415 pF typical
- Q_g (10V) = 63 nC typical
- Lowest $R_{DS(ON)}$ * C_{ISS} figure-of-merit in the market
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Pricing and Availability

The AON6290 is immediately available in production quantities with a lead-time of 12-14 weeks. The unit price for 10,000 pieces is $1.184.

For more information, please visit www.aosmd.com [2]

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