

Gallium Nitride Power Transistor for Wireless Base Stations

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According to JCN Network, Oki Electric has announced that it has started sample provisioning of its Gallium Nitride High Electron Mobility Transistor (GaN-HEMT), a high frequency wave power [transistor](#) for wireless base stations.

The new transistor, using gallium nitride material, will enable a reduction in size and power consumption for base stations for 3G mobile phones and PHS, and wireless telecom base stations for wireless Metropolitan Area Network (MAN).

GaN-HEMT can operate at over three to five times higher voltage than that of GaAs-HEMT, which enables higher voltage power. On the other hand, the power loss in peripheral component (ohm loss) is reduced because the operating current can be decreased by 1/3 to 1/5, which contributes to lowering the power consumption of the entire circuit. Because of these advantages, a product for high output wireless and wireless base stations using GaN-HEMT are highly demanded.

Oki plans sample shipment from early 2006, after prior evaluations with specific customers, and volume production from the latter half of 2006. By 2008, Oki aims to achieve 30% of the GaN high frequency power device market in the world.

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