

Wind converter manufacturer scales-up use of ABB IGBT modules

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China's Hopewind selects ABB's LoPak modules following intensive two years of testing

Following more than two years of stringent testing, including one year of field operations, ABB's LoPak IGBT module is now qualified for use by one of the world's leading wind power converter manufacturers.



Hopewind's 2.5 MW DFIG converter in operation

China's Shenzhen Hopewind Electric Co., Ltd. is scheduled to take volume delivery of LoPak 1700 V / 450 A medium power IGBT modules for use in wind converter applications operating between 1.5 to 2.5 MW (megawatt). This follows successful collaboration between Hopewind, Sunking (distribution partner in China) and the ABB Power Grids team in Lenzburg, Peking and Manila. Hopewind's current production phase

will generate up to 2,000 MW using wind power, a capacity equivalent to the needs of one million Swiss households.

Hopewind focuses on research, manufacturing, sales and service of renewable energy and electric drive products, with its main products ranging from wind power generation, photovoltaic generation and industrial drive products.



LoPak enables extra transient over-current capability by taking advantage of the IGBT module's maximum operating junction temperature of 175°C, compared to the typical 150°C. The current configuration is a 1700 V phase-leg (half-bridge) IGBT module with copper base plate, using ABB's uniquely designed SPT++ IGBT and diode devices and offered with 450 A, 300 A and 225 A current ratings.

This combination provides outstanding safe operating area (SOA) and over-current capability. Within its product class, LoPak benefits from ABB's know-how in robust electrical performance and high reliability.

The detailed design and virtual prototyping used by ABB makes the LoPak module's current distribution well-balanced during switching and especially controlled under overload conditions. Excellent field feedback has confirmed that the LoPak modules carries the same DNA for high reliability and robustness as the entire family of ABB's high-power semiconductors.

The LoPak module is a key part in ABB's expanding catalog of products to support the renewable energy and industrial marketplace.