

Telecom Products

GaN HEMT Transistors for High Efficiency Small Cell Telecom and Macro Base Transceiver Station Applications



Wolfspeed's 50 V GaN HEMT devices enable a significant reduction in the energy needed to power cellular networks. The world's cellular network is estimated to consume more than 100 TWh of electricity per year (approximate value of \$12 billion US dollars) and 50-80 percent of the networks' power is consumed by the systems' power amplifiers and feed infrastructure. Leveraging this innovative Wolfspeed technology, radio base-station power amplifiers have demonstrated performance improvements of more than 20 percent over incumbent technology at 2.6 GHz operating under the latest 4G LTE signals. This increased power amplifier efficiency could save an estimated 10 TWh per year, the equivalent power output of two nuclear power plants.



BENEFITS

- High reliability
- Higher efficiency
- Reduction of heat-sink requirements
- High degree of DPD correction can be applied
- SiC substrate provides the best thermal performance

FEATURES

- GaN-on-SiC technology
- Wide-band performance
- High power density
- High-frequency operation
- High breakdown voltage

PRODUCT SELECTOR PORTFOLIO, 28 V

Peak Output Power	GSM, LTE 750 - 950 MHz	DCS, PCS, UMTS, LTE 1.8 2.3 GHz	LTE 2.3 - 2.7 GHz	LTE 3.3 - 3.8 GHz	LTE 5.3 - 5.8 GHz
6 W	CGH40006S CGH60008D	CGH40006S CGH60008D	CGH40006S CGH60008D	CGH40006S CGH60008D	CGH40006S CGH60008D
15 W	CGH27015F / P CGH60015D	CGH27015F / P CGH60015D	CGH27015F / P CGH60015D	CGH35015F / P CGH60015D	CGH55015F1 / P1 CGH60015D
30 W	CGH27030F / P / S CGH60030D	CGH27030F / P / S CGH60030D	CGH27030F / P / S CGH60030D	CGH35030F / P* CGH60030D	CGH55030F1 / P1 CGH60030D
60 W	CGH27060F CGH60060D	CGH27060F* CGH60060D	CGH27060F CGH60060D	CGH35060F CGH60060D	CGH60060D
120 W	CGH09120F CGH60120D	CGH21120F CGH60120D	CGH25120F CGH60120D	CGH60120D	CGH60120D
240 W	-	CGH21240F*	-	-	-

*Doherty Reference Design Available. Contact Wolfspeed.

PRODUCT SELECTOR PORTFOLIO, 50 V

Peak Output Power	GSM, LTE 750 - 950 MHz	DCS, PCS, UMTS, LTE 1.8 2.3 GHz	LTE 2.3 - 2.7 GHz	LTE 3.3 - 3.8 GHz	LTE 5.3 - 5.8 GHz
6 W	CGHV1F006S	CGHV1F006S	CGHV1F006S	CGHV1F006S	CGHV1F006S
15 W	CGHV27015S	CGHV27015S	CGHV27015S*	CGHV27015S*	CGHV27015S
30 W	CGHV27030S	CGHV27030S	CGHV27030S*	CGHV27030S*	CGHV27030S
60 W	CGHV27060MP	CGHV27060MP	CGHV27060MP	CGHV35060MP	-
100 W	-	CGHV22100F / P	CGHV27100F / P	-	-
200 W	-	CGHV22200F / P	CGHV27200F / P	-	-

*Doherty Reference Design Available. Contact Wolfspeed.

Powering More. Consuming Less.