

S-band 80 W Power GaN HEMT

Technology Overview

- ETRI's SGH1600080P is an unmatched gallium nitride (GaN) high electron mobility transistor (HEMT) with gate length of 0.5mm fabricated by i-line stepper in ETRI's GaN-dedicated processing laboratory and tested in metrology laboratories. The SGH1600080P offers a general purpose solution to a variety of RF and microwave applications.

Core Technologies

- Up to 4 GHz Operation
- 80 W Typical P_{sat} at 3 GHz
- 35% Efficiency at P_{sat} and 6 dB Power Gain at 3 GHz
- Size: 17.8 x 20.3 x 2.08 mm³

Application Area and Advantages

- 2-Way Private Radio
- Broadband Amplifiers
- Cellular Infrastructure
- Class A, AB, Linear Amplifiers Suitable for OFDM, W-CDMA, and CDMA

Accomplishments

- A number of intellectual properties including SCI papers and patents
- Technology licensing or joint research for commercialization preferred

