



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





# Freescale Introduces

## **MMRF5014H**

125 W CW, 50 V GaN on SiC RF Power Transistor

November 2014



# Freescale RF Military Overview

- Freescale RF is **#1 in RF power** for cellular infrastructure\*
- Strong presence in ISM, mobile radio, broadcast and avionics
- June 2013: Freescale RF announced new focus supporting U.S. defense industry

## Freescale RF Military Value Proposition

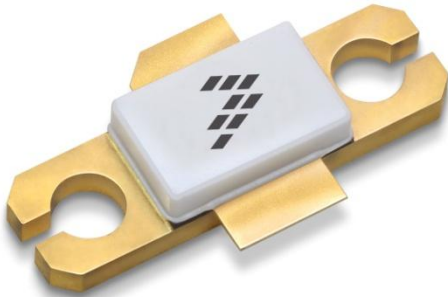
- **Products and Technology**
  - Leveraging **20 years of innovation** in RF power
  - Highest performing RF portfolio
- **Support**
  - **U.S. LDMOS fabrication** and dedicated internal manufacturing
  - Freescale **product longevity** program (10 or 15 years)
  - Dedicated U.S.-based applications & systems engineering support
- **Compliance**
  - ITAR compliant, secure technical data handling

\*Source: ABI 2013 Report



# MMRF5014H — Device Details

## Product Overview



### Product Performance

- Output Power: 125 W
- Supply Voltage: 50 V
- Frequency of Operation: up to 2690
- Gain : 16 dB min
- Drain Efficiency: 58% min
- Wideband GaN on SiC RF Power Transistor

### Description

This 125 W RF power transistor is designed for wideband operation up to 2690 MHz. The high gain, rugged and wideband performance of this device make it ideal for large-signal, common-source amplifier applications for linear and compressed amplifier circuits.

### Features

- Advanced GaN on SiC, offering high power density
- Suitable for octave and decade bandwidth wideband amplifiers
- Input matching for extended wideband performance
- High ruggedness, 20:1 VSWR
- Low thermal resistance
- 200-2500 MHz wideband reference circuit

# MMRF5014H — Featured Device

## Applications

- Wideband or narrowband amplifiers
- Ideal for multi octave communication applications
- Professional and military radios
- Radar, jammers and electronic warfare
- General purpose wideband amplifiers

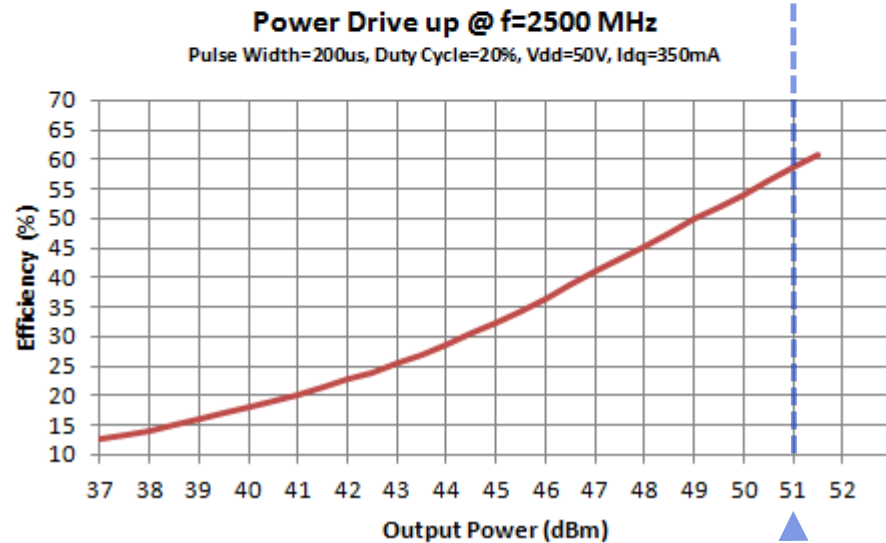
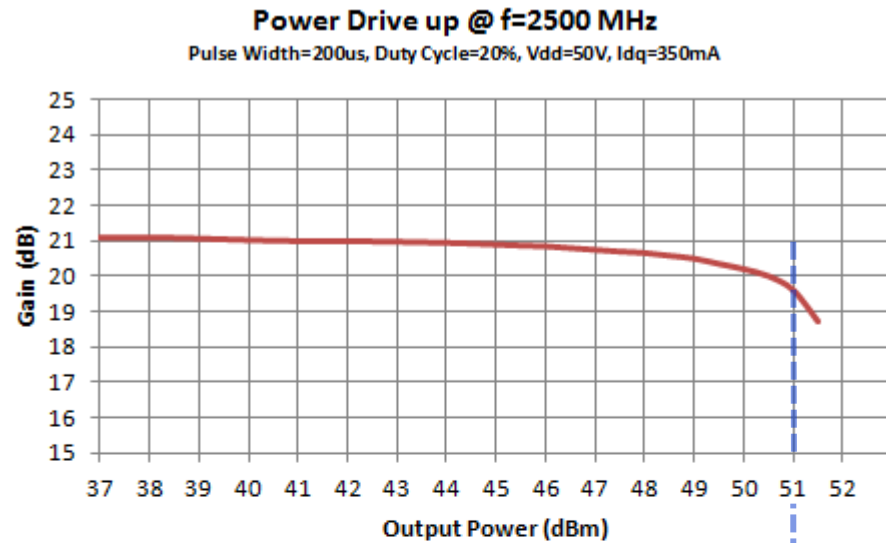
## Competitive Advantages

- Industry leading wideband 200-2500 MHz performance
  - 12 dB min gain and 40% min efficiency
- Low thermal resistance due to die attached technology and packaging
- 125 watts CW capable
- Device will be on Freescale's 15 year Product Longevity Program
- Able to replace multiple RF amplifiers with one wideband PA
- Application circuit support
- Dedicated RF Military team
- Availability: Sampling now. In production Q4 2014. (Orderable Part#: MMRF5014HR5)

# NXP MMRF5014H

## 125 W GaN

### Power Drive Up



125W

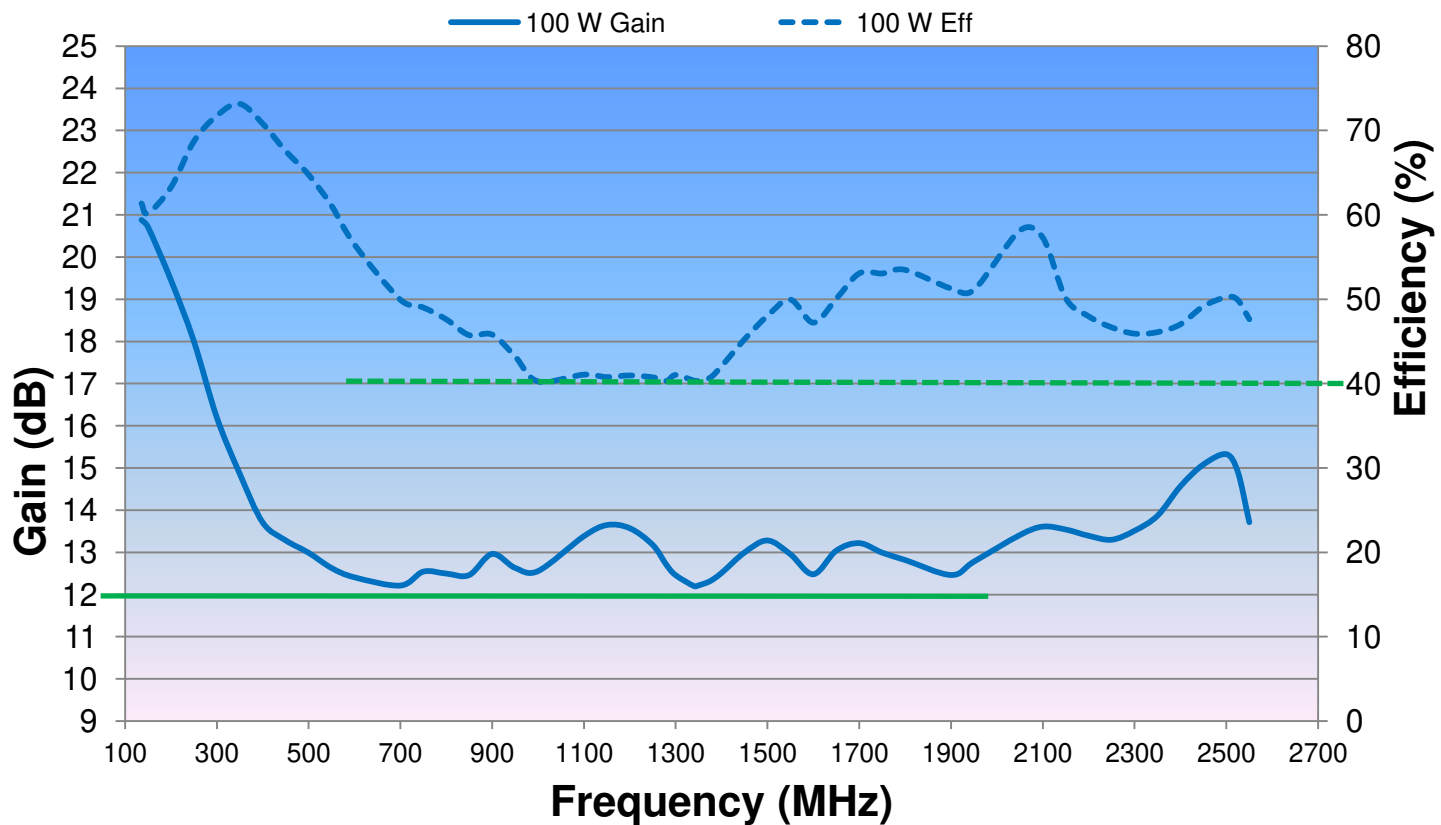


## 200-2500 MHz Circuit

- Design Goals Met
  - ▶ 100 W CW
  - ▶ 200-2500 MHz
  - ▶ 12 dB min gain
  - ▶ 40% min eff
  - ▶ 0.8° C/W

### MMRF5014H 100W GaN CW Performance

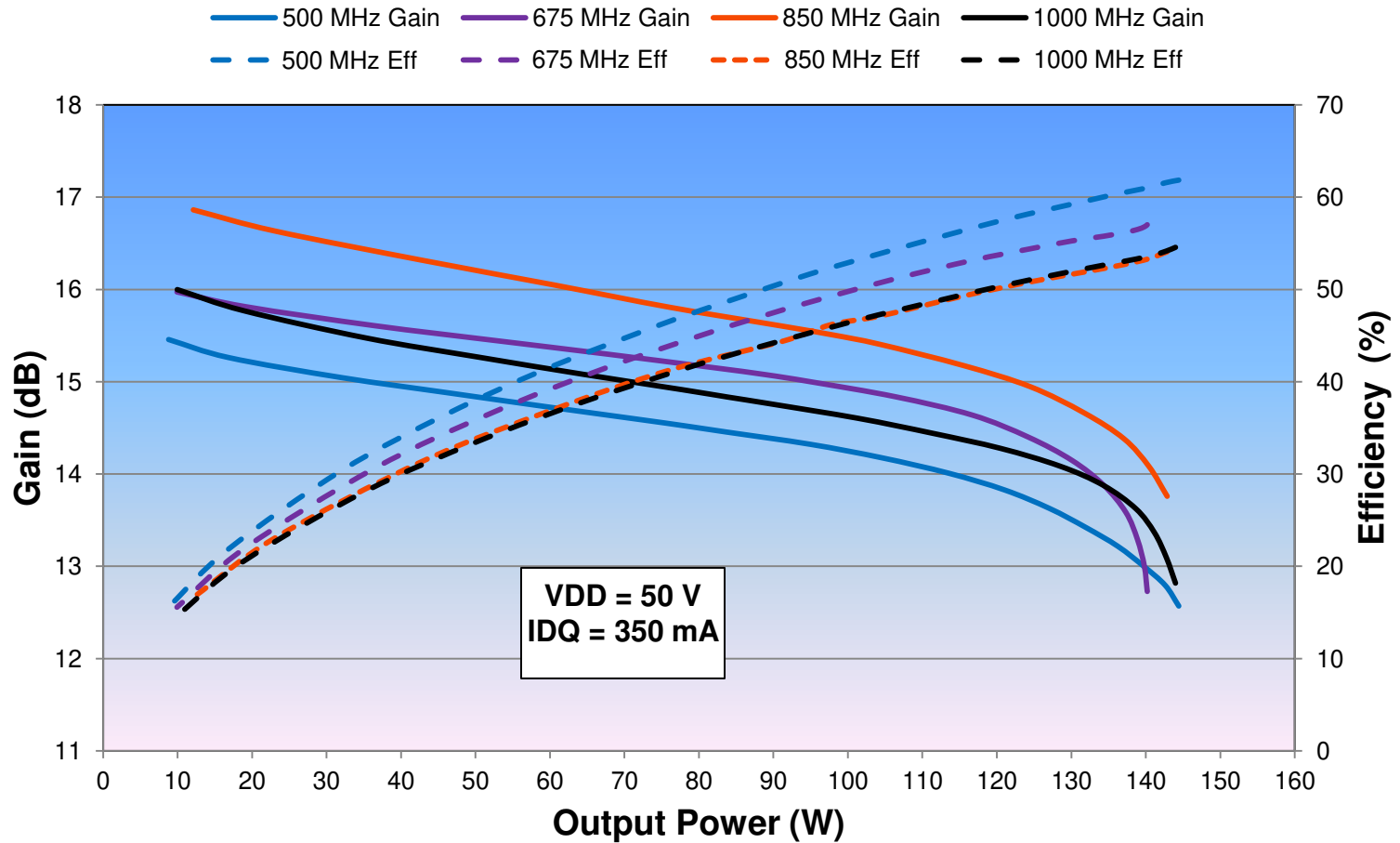
VDD = 50 V, IDQ=350 mA





# MRF5014H — 500-1000 MHz Circuit

## CW Performance

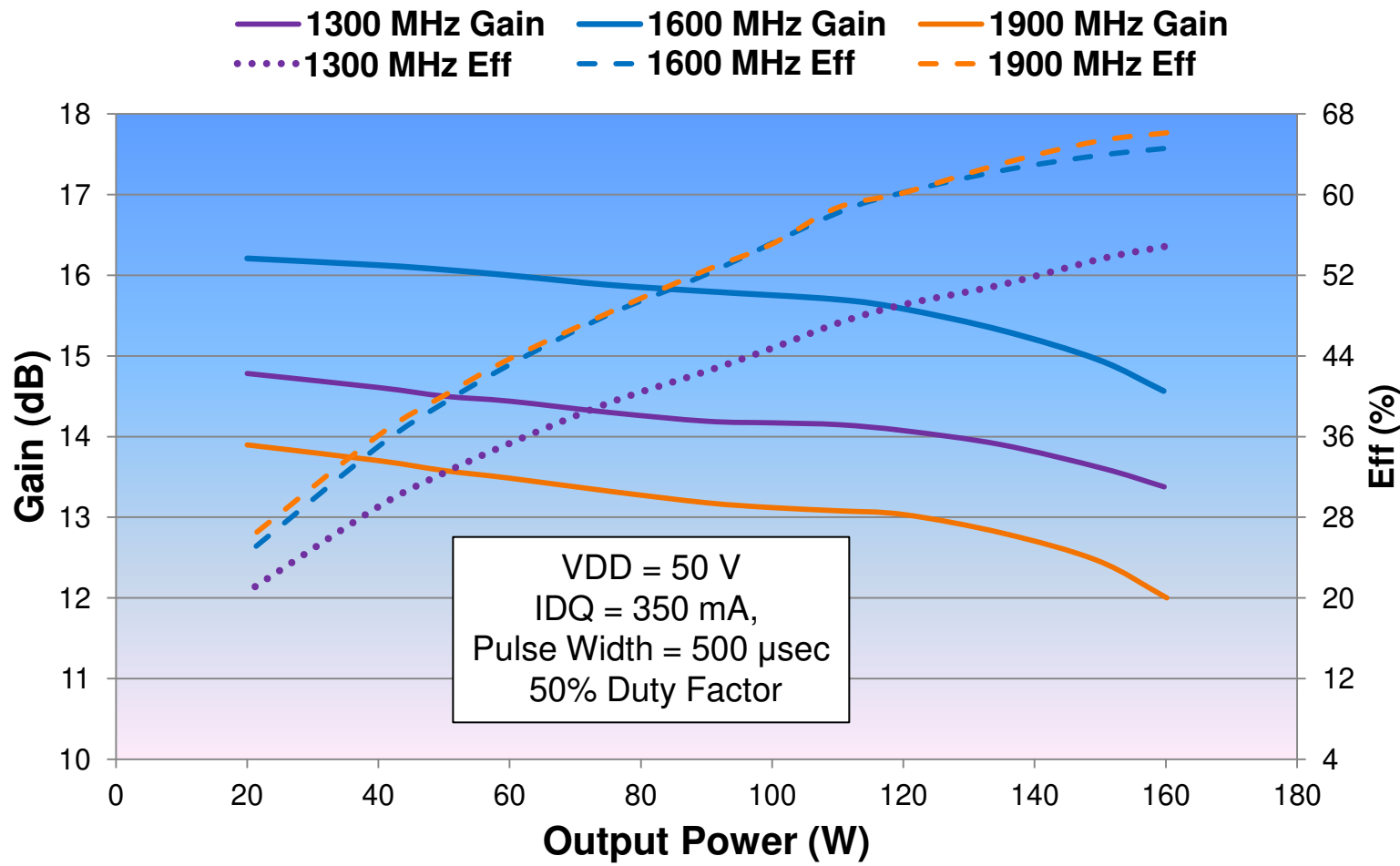






# MRF5014H — 1300-1900 MHz Circuit

## Pulsed Performance





[www.Freescale.com](http://www.Freescale.com)