

# 5G

## High PAE 5G Ka-Band Power Amplifier Module (PAM) Family

Decades of constant improvement yields the Duet DMA28xx family of high gain, best-in-class power added efficiency (PAE), high RF output 5G Ka-Band millimeter wave (mmW) power amplifier modules (PAMs). Developed to power 5G networks with unmatched bit efficiency combined with the smallest possible landed footprint, the 18 dB gain DMA2818 and the 25 dB gain DMA2825 form the Portfolio. The DMA2818 produces 250 mW (OP1dB) with 39% PAE while the DMA2825 produces 500 mW (OP1dB) with 41% PAE making each ideal as driver PAMs for 5G BTS MA-MIMO antenna arrays or as the output stage for long-reach 5G HetNet small cell transmitters using high-element count antenna arrays.



### Applications & Benefits

- High Gain High Power 5G Ka-Band TDD Power Amplifier Module (PAM)
- 18/25 dB Minimum Gain from 27.5 to 28.35 GHz, DMA2818/DMA2825
- +24/+27 dBm OP1dB (CW Tone), DMA2818/DMA2825
- < 2% EVM RMS 256-QAM OFDMA Modulation 5G UL
- Power Added Efficiency > 38%/40% (28 GHz), DMA2818/DMA2825
- Single Power Supply Input (+3 Vdc)
- Advanced High Breakdown Voltage Indium Phosphide (InP) Power Amplifier Technology
- Low Profile Air-Cavity QFN-12 3 x 3 x 1.2 mm Surface Mount Package

## RF and Electrical Performance

Part Number	Frequency Range (GHz)	Vcc (Vdc)	Gain (dB)	OP1dB/ Linear RF Output Power (dBm)	OIP3 @ 28 GHz (dBm)	Icc, Operating Current (mA)	PAE (%)	Worst Case EVM, 256-QAM (%RMS)	PA Die	Package
DMA2818	27.5 to 28.35	+3	18	+24/+18	+37	215	>38	<2	InP	QFN-12, 3x3x1.2 mm
DMA2825	27.5 to 28.35	+3	25	+27/+21	+40	400	>40	<2	InP	QFN-12, 3x3x1.2 mm

## Other Duet Microelectronics Products



**DOCSIS®  
Amplifiers**



**FTTx Optical  
Receiver Modules**



**CBRS Transmit  
Module**

## About Duet Microelectronics

Our singular focus is helping you build products that you couldn't make before. Since our founding in 2016, we have attracted the industry's top design, engineering, process technology and applications talent. Guided by veteran RF business leaders and supported by a robust supply chain, modern quality management, service and support systems, our team is able to offer top tier RF semiconductor technology, products, service and support.

***So, trust Duet Microelectronics for your next project. We offer more than just RF...we deliver RF that works for you!***

Contact us today to learn more about our products or discuss having an RFIC designed to your specifications!