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MICROELECTRONICS
RF that works for you

Product Selection Guide

450 to 6000 MHz LTE-A-Pro/5G/WLAN Low Noise Amplifier (LNA) Family

- Ultra-low Noise Figure combined with Flat Gain
- Complete 5G (<6 GHz), LTE-A-Pro, & WLAN Frequency Coverage, 450 to 6000 MHz
- Best-In-Class Return Loss (-15 dB Worst Case) with No External-to-Package Matching

Part Number	Frequency Range (MHz)	Gain @ MHz (dB)	Gain Flatness (±dB)	Max NF @ MHz (dB)	Vdd (Vdc)	+3/+5V Idd (mA)	Max Turn On Time (ns)	Max Turn Off Time (ns)	Package
DZA0003	450 to 1500	21 @ 900	1.0	0.4 @ 900	+3/+5	40/65	50	20	PDFN-8 w/EP
DZA0004	1500 to 2700	21 @ 2000	1.0	0.4 @ 2000	+3/+5	40/65	50	20	PDFN-8 w/EP
DZA0005	3400 to 4800	21 @ 3500	1.5	0.6 @ 3500	+3/+5	40/65	50	20	PDFN-8 w/EP
DZA0006	4500 to 6000	21 @ 5500	2.0	0.8 @ 5500	+3/+5	40/65	50	20	PDFN-8 w/EP

FTTx Optical Receiver Modules (ORMs)

- Fully Autonomous Current-to-Voltage Transimpedance for FTTx & HFC Optical Receivers
- Constant Cascadable RF Output over -15 to +3 dBm Optical Input Power
- No Feedback Loop or Voltage Variable Attenuator (VVA) Required

Part Number	Frequency Range (MHz)	ORM Supply Voltage (Vdc)	Optical Power Input Range, Poptical (dBm)	RF Output Power, Constant (dBmV/ch)	EINC, -15 dBm Poptical (pA/ Sq-Rt-Hz)	Typical Supply Current @ +5 Vdc (mA)	Package Type
DTA0002	87 to 1000	+5 (+12 Optional)	+3 to -15	+23	≤2.0	135	QFN-16 3x3 mm
DTA0003	87 to 1000	+5 (+12 Optional)	0 to -18	+15	≤2.0	85	QFN-16 3x3 mm

LTE Band 48 CBRS/5G Power Amplifier Module (PAM) Family

- 35dB Minimum Gain from 3550 to 3700 MHz
- +36/+33 dBm OP1dB (CW Tone) DMA3700/DMA3701
- +28/+24 dBm Linear RF Power Output TD-LTE Uplink (B42/B43/B48), DMA3700/DMA3701

Part Number	Frequency Range (MHz)	Vcc (Vdc)	Gain (dB)	OP1dB/ Linear RF Output Power (dBM)	Icc, Operating Current (mA)	PAE (%)	Worst Case EVM, 256-QAM (%RMS)	Harmonics (dBc)	Suprious Output Level (dBc)	PA Die	Package
DMA3700	3550 to 3700	+8	35	+36/+28	250	>28	<2.5	2fo: -42 3fo: -58	-60	InGaP HBT	5x5x1.3 mm, 10-Pin SMT Module
DMA3701	3550 to 3700	+5/+3.6	35	+33/+24	200	>22	<2.5	2fo: -42 3fo: -58	-60	InGaP HBT	5x5x1.3 mm, 10-Pin SMT Module

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

- 18/25 dB Minimum Gain from 27.5 to 28.35 GHz, DMA2818/DMA2825
- +24/+27 dBm OP1dB (CW Tone), DMA2818/DMA2825
- Power Added Efficiency > 38%/40% (28 GHz), DMA2818/DMA2825

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

Surface Mount D3.1 Compliant MMIC Amplifiers

- Lowest Cost Per Bit Delivered Performance (Push-Pull Performance in a SE Design)
- Best-In-Class MER/BER for No Bit Error Digital content delivery over Long Distances
- Wide Single Voltage operating ranges (+5, +8, +12 Vdc) maximizing Application Flexibility

Part Number	Gain @ MHz (dB)	Minimum MER @ MHz (db)	Typical CSO @ +24 dBmV/ch RFout (dBc)	Typical CTB @ +24 dBmV/ch RFout (dBc)	Typical IRL, 5-100 MHz (dB)	Typical Supply Current @ +8 Vdc (mA)	Typical BOM SMT Passive Count	Package
DMA2310	14.5 @ 210	>40 @ 210	-80	-78	>20	180	<10	SOT-89
DMA2317	14 @ 210	>50 @ 210	-80	-78	>20	180	<10	Batwing BW-16
DMA2318	14 @ 210	>50 @ 210	-80	-78	>20	180	<10	SOIC-8
DMA2319	13.5 @ 1794	>44 @ 1794	-80	-78	>22	180	<10	QFN-16
DMA2320	14 @ 210	>52 @ 210	-86	-78	>20	360	<15	SOIC-8

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

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!

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