

WIRELESS INFRASTRUCTURE RF PRODUCTS



RF Solutions for Cellular Base Stations, MMDS, WLL
and Satellite Applications

ANADIGICS Wireless Infrastructure Products

ANADIGICS offers a variety of products for wireless infrastructure applications. From wideband gain blocks with best-in-class linearity to highly efficient devices capable of delivering high levels of saturated output power, ANADIGICS amplifiers are ideal for use in cellular base station, MMDS, WLL and satellite communication applications. ANADIGICS also offers a high-linearity downconverter to meet frequency conversion needs in wireless base stations. Each product is assembled in a convenient surface mount package and is manufactured on 6-inch wafers in our own MESFET or InGaP HBT process to provide the highest reliability.

Benefits for Wireless Infrastructure Equipment Manufacturers

High Linearity, to support multi-carrier systems and complex modulation schemes

High Reliability, for a reduced risk of failures in the field

Wideband Products, for a variety of applications and frequency bands

High Efficiency Products, to minimize power supply demands

Surface Mount Packages, for convenient assembly in manufacturing

Gain Block Amplifiers

All ANADIGICS gain blocks are designed to provide high linearity and low noise over a wide frequency band. The wideband characteristics of these devices make them versatile enough that they can be used in either transmitter or receiver chains, and in equipment made for different transmission standards or frequency bands. The AGB3300 and AGB3301 devices are manufactured in the same MESFET process used for our high linearity CATV infrastructure amplifiers used world-wide. The rest of the ANADIGICS gain block family consists of InGaP HBT designs that reduce the risk of field failures by offering a superior MTTF and higher reliability than AlGaAs designs. The most recent designs, such as the AGB3309, AGB3310, AGB3311 and AGB3312, incorporate internal bias circuits that minimize the external component count and enable the use of a single +5V supply. All the ANADIGICS gain blocks are offered in the SOT-89 surface mount package, enabling small, cost effective solutions and facilitating the replacement of older devices that are prevalent in today's designs.

Part Number	Tech	Bandwidth (MHz)	GAIN * (dB)	OIP3 * (dBm)	P1dB * (dBm)	NF (dB)	Vsup (V)	Isup (mA)	Package	Status/ Availability	Part No. Cross Ref	Comments
AGB3300	MESFET	250 to 3000	13	+43	+21	2.0	+5	140	SOT89	In Production	AH1	Single
AGB3301	MESFET	250 to 3000	13.5	+45	+24	2.4	+9	110	SOT89	In Production	AH101	Cascode
AGB3302	HBT	250 to 3000	16	+36	+18	4.5	+8	65	SOT89	In-Production	NGA489	Darlington
AGB3303	HBT	250 to 3000	21	+39	+19	4.0	+8	80	SOT89	In-Production	NGA589	Darlington
AGB3306	HBT	250 to 3000	18.5 **	+27 **	+14.5 **	4.5	+8	33	SOT89	In-Production	NGA386	Darlington
AGB3307	HBT	250 to 3000	12	+42	+17.5 **	5.0	+8	80	SOT89	In-Production	NGA689	Darlington
AGB3309	HBT	250 to 3000	15.5	+35	+18	5.2	+5	65	SOT89	Samples 4Q'03	NGA489	Darlington with internal bias
AGB3310	HBT	250 to 3000	19.5	+37	+19	5.2	+5	80	SOT89	Samples 4Q'03	NGA589	Darlington with internal bias
AGB3311	HBT	250 to 3000	20	+27	+15	6.0	+5	37	SOT89	Samples 4Q'03	NGA386	Darlington with internal bias
AGB3312	HBT	250 to 3000	11	+42	+17	5.0	+5	80	SOT89	Samples 4Q'03	NGA689	Darlington with internal bias

* Performance at 900MHz, except where ** notes 1.95 GHz; +25 deg C, 50 Ohm system

Driver Amplifiers

For higher power wideband applications, ANADIGICS offers the ADR3410 driver amplifier. Providing the same high levels of reliability as the gain blocks, the driver amplifier has a 1dB gain compression of approximately 1 Watt. This highly linear InGaP HBT design is available in a surface mount SOIC-8 package, and requires only a single +5 V supply.

Part Number	Tech	Bandwidth (MHz)	GAIN (dB)	OIP3 (dBm)	P1dB (dBm)	NF (dB)	Vsup (V)	Isup (mA)	Package	Status/ Availability	Part No. Cross Ref	Comments
ADR3410	HBT	850 to 900 2100 to 2200	18.0 12.5	+43	+29	4.0	+5	280 240	SOIC8	Samples 4Q'03	RF5187	Single Stage

Power Amplifiers

ANADIGICS also has amplifiers designed for narrowband applications that require high saturated output power levels. These products boast high levels of efficiency for operation in specific frequency bands. The AWT921 is optimized for the 900 MHz cellular band, and the AWT1921 supports applications at 1.6 GHz. The wide body SSOP-28 surface mount package incorporates a heat slug to allow for improved device reliability at the targeted power levels.

Part Number	Tech	Bandwidth (MHz)	GAIN (dB)	Pout (dBm)	PAE (%)	Vsup (V)	Vbias (V)	Itot (mA)	Package	Status/ Availability	Comments
AWT921	MESFET	925 to 960	28	+39	40	+8.5	+5, -3	565	SSOP28 (Wide Body)	In Production	Cellular Base Station Driver Amplifier (spec Pout level is saturated power)
AWT1921	MESFET	1610 to 1626.5	30	+36	25	+9	+5, -5	535	SSOP28 (Wide Body)	In Production	Satellite Transmit Link Amplifier (spec Pout level is linear power)

Frequency Converters

ANADIGICS' highly linear frequency converter products integrate the wideband LNA, mixer and oscillator stages. In addition to providing high 2nd and 3rd order input intercept points, these devices are highly reliable, small in size and low cost, making them ideal candidates for wireless infrastructure receivers.

Part Number	Tech	Bandwidth (MHz)	GAIN (dB)	IIP3 (dBm)	φ Noise * (dBc/Hz)	NF (dB)	Vsup (V)	Isup (mA)	Package	Status/ Availability	Comments
ACD0900	MESFET	RF: 900 to 1200 IF: 35 to 150	9.5	+12	-89	8.0	+5	80	SOIC16 (Gull Wing)	In Production	Downconverter

* Phase noise measured at a 10 kHz offset.



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SUNSTAR 商斯达实业集团是集研发、生产、工程、销售、代理经销、技术咨询、信息服务等为一体的高科技企业，是专业高科技电子产品生产厂家，是具有 10 多年历史的专业电子元器件供应商，是中国最早和最大的仓储式连锁规模经营大型综合电子零部件代理分销商之一，是一家专业代理和分销世界各大品牌 IC 芯片和电子元器件的连锁经营综合性国际公司，专业经营进口、国产名厂名牌电子元件，型号、种类齐全。在香港、北京、深圳、上海、西安、成都等全国主要电子市场设有直属分公司和产品展示展销窗口门市部专卖店及代理分销商，已在全国范围内建成强大统一的供货和代理分销网络。我们专业代理经销、开发生产电子元器件、集成电路、传感器、微波光电元器件、工控机/DOC/DOM 电子盘、专用电路、单片机开发、MCU/DSP/ARM/FPGA 软件硬件、二极管、三极管、模块等，是您可靠的一站式现货配套供应商、方案提供商、部件功能模块开发配套商。商斯达实业公司拥有庞大的资料库，有数位毕业于著名高校——有中国电子工业摇篮之称的西安电子科技大学（西军电）并长期从事国防尖端科技研究的高级工程师为您精挑细选、量身订做各种高科技电子元器件，并解决各种技术问题。

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