ANADIGICS

CELLULAR PRODUCTS

Advanced Power Amplifier Designs

We are leveraging patented design techniques and innovative InGaP-*Plus*™ process technology to deliver a complete portfolio of power amplifiers with industry-leading performance and integration

Optimized for Longer Battery Life

Power distribution profiles, such as the one published by the GSM Association in their TS09 procedure for measuring battery life, predict that 3G mobile devices will operate more frequently in low to medium power levels. Therefore, delivering high efficiency at low power levels helps to extend talk-time in both feature phones and smartphones.

While talk-time in CDMA and WCDMA networks require phones to backed-off power much of the time, extensive data use and LTE network typically require short bursts of high power RF for data transmission. Therefore, providing high efficiency at high power levels helps to extend battery-life for devices that operate in data mode, such as smartphones and tablets.

ANADIGICS has developed several product families that are optimized for a variety of applications by delivering the industry's highest efficiencies in low power mode, high-power mode, and across all power levels. These solutions are quickly becoming the preferred choice of designers by enabling them to deliver greater overall battery-life in mobile devices.

ProEficient-*Plus*™ Power Amplifiers

ProEficient-Plus power amplifiers set the standard for performance by delivering the industry's highest levels of combined efficiency. These solutions provide ultra-high efficiency in both low/medium and high power modes for greater overall battery-life, including talk-time and data use. ProEficient power amplifiers are available in dual-band configurations.

ProEficient™ Power Amplifiers

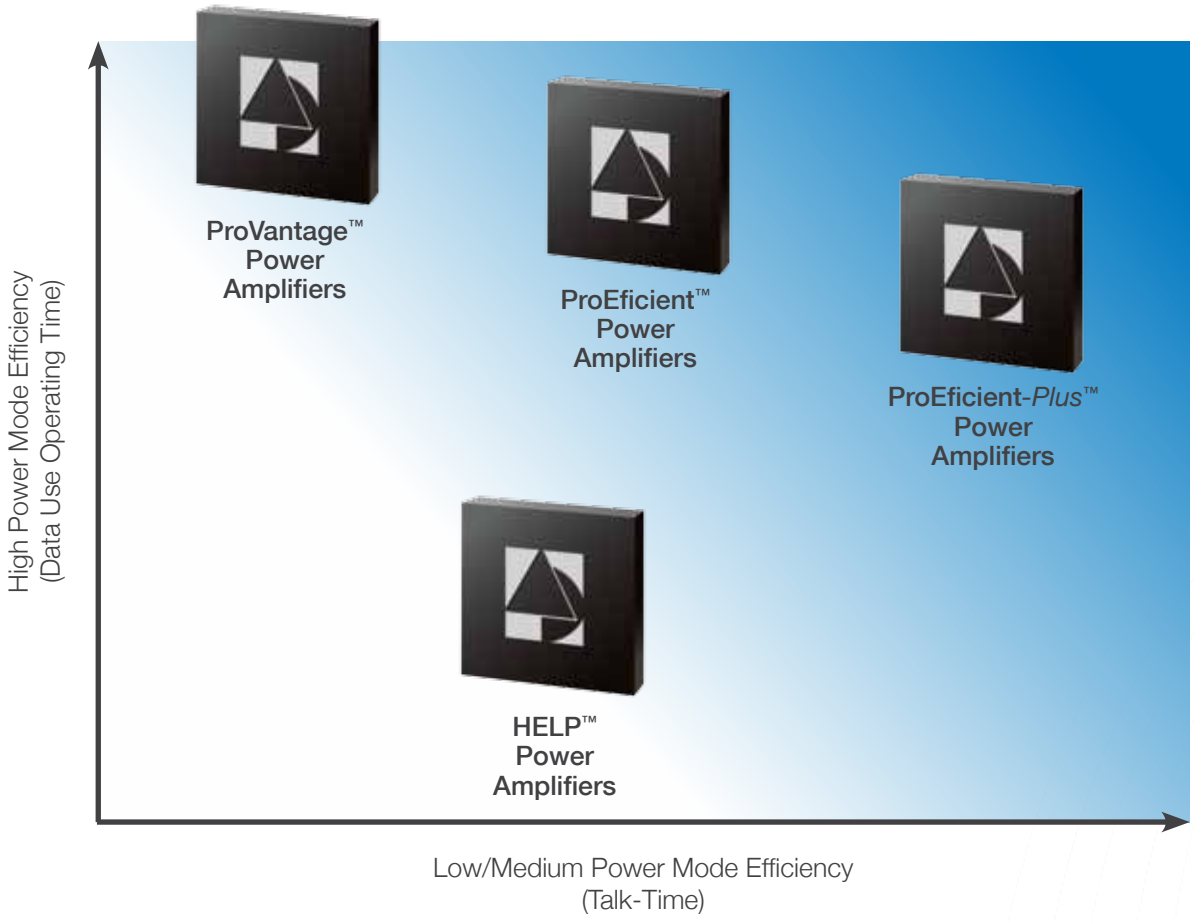
ProEficient power amplifiers offer outstanding high power mode efficiency combined with very high low/medium power mode performance. These solutions, provided in single-band configurations, are optimized to extend battery-life in LTE devices and may also be used with average power tracking (APT) to help provide even lower current consumption.

ProVantage™ Power Amplifiers

ProVantage power amplifiers are designed to deliver tremendous value by providing the industry's highest levels of LTE efficiency in high power mode. These single-band power amplifiers enable longer operating time for high data use mobile devices.

HELP™ Power Amplifiers

High-Efficiency-at-Low-Power (HELP) power amplifiers enable mobile phones with greater talk-time. HELP power amplifiers are offered in several versions, including HELP3™ with two mode states, HELP3E™ with three mode states and dual-band designs, HELP3DC™ optimized for use with SMPS, and HELP4™ with three mode states.



Single-Band CDMA/ EVDO & WCDMA/HSPA Power Amplifiers

Extensive Family of Single-Band Solutions that Help Extend Battery-Life in 3G Applications

Our single-band power amplifiers deliver high efficiency and linearity to enable handsets that feature longer battery-life and high throughput data connectivity. Internal voltage regulators, built-in RF couplers and DC-blocks simplify designs for cellular handsets, smartphones, wireless modems and other mobile devices.

- **HELP™ technology** to deliver the high efficiency at low power levels for longer talk-time
- **Outstanding linearity performance** to ensure exceptional LTE throughput and signal integrity
- **Internal voltage regulation and integrated DC blocks on RF ports** to help reduce PCB space requirements

Single-Band CDMA/EVDO & WCDMA/HSPA Power Amplifiers

Frequency (MHz)	UMTS Bands	CDMA Bands	Application	Technology	Power Modes	Output Power (dBm)	Gain (dB)	Package (mm)	Part Number
450 - 460		11	CDMA/ EVDO	Standard	2	29.5	27	4 x 4	AWT6388
814 - 849		0, 10	CDMA/ EVDO	ProEficient	2	28	29	3 x 3	ALT6655L
816 - 849		0, 10	CDMA/ EVDO	HELP	2	28	28	3 x 3	AWC6340H
1710 - 1785		8, 15	CDMA/ EVDO	ProEficient	2	28	26	3 x 3	AWT6654
1850 - 1915		1, 14	CDMA/ EVDO	ProEficient	2	28	27	3 x 3	AWT6652

Single-Band LTE Power Amplifiers

Complete Family of Single-Band Solutions Optimized to Extend Battery-Life in Today's Most Demand LTE Devices

Our LTE single-band power amplifiers deliver best-in-class linearity to ensure a stable connection for maximum data throughput. The new ProEficient™ power amplifiers combine high efficiency at low/medium and high output power levels to help extend battery-life for when using both voice and data. While our single-band LTE power amplifiers offer exceptional performance without DC-DC converters, many are optimized for use with average power tracking (APT) to further increase efficiency and reduce current consumption at medium and low operating powers.

- **ProEficient™ technology** to deliver the exceptional efficiency across all power levels for longer battery-life
- **Exceptional linearity performance** to ensure exceptional LTE throughput and signal integrity
- **Internal voltage regulation and integrated DC blocks on RF ports** to help reduce PCB space requirements

Single-Band LTE Power Amplifiers

Frequency (MHz)	UMTS Bands	Application	Technology	Power Modes	Output Power (dBm)	Gain (dB)	Features	Part Number
777 – 798	13, 14	LTE	ProEficient	2	27.5	31	APT Compliant	ALT6724
814 - 849	5,6,18,19,26	LTE	HELP3DC	2	28.5	28.5	APT Compliant	AWT6635H
824 - 849	5,6,18,19,26	LTE	ProVantage	3	28.6	29	APT Compliant	AWT5005
814 - 849	5,6,18,19,26	LTE	ProEficient	2	28.5	27	APT Compliant	ALT6655L
832 - 862	20	LTE	ProEficient-*Plus*	2	27.5	30	APT Compliant	ALT6730
880 - 915	8	LTE	HELP3DC	2	28.5	29	APT Compliant	AWT6638H
880 – 915	8	LTE	ProVantage	3	28.5	28.5	APT Compliant	AWT5008
880 – 915	8	LTE	ProEficient	2	28.5	27	APT Compliant	ALT6658L
1710 – 1755	3, 4, 9, 10	LTE	ProVantage	3	28.5	27.5	APT Compliant	AWT5004
1710 – 1785	3, 4, 9, 10	LTE	ProEficient	2	28.5	27	APT Compliant	AWT6654
1850 – 1915	2, 25	LTE	ProVantage	3	28.6	27.5	APT Compliant	AWT5002
1850 – 1915	2, 25	LTE	ProEficient	2	28.5	27	APT Compliant	AWT6652
1920 – 1980	1	LTE	ProVantage	3	28.2	27.5	APT Compliant	AWT5001
1920 – 1980	1	LTE	ProEficient	2	28.5	27	APT Compliant	AWT6651
2500 - 2570	7	LTE	HELP4	3	27.7	28		ALT6707

Dual-Band Power Amplifiers

Two Independent Amplification Chains in a Compact Package to Deliver Outstanding Performance for Each Band, Extend Battery-Life, and Save Valuable PCB Space

Our dual-band power amplifiers incorporate advanced InGaP-Plus™ technology and unique design architectures to help extend battery-life in power hungry 3G/4G wireless devices. ANADIGICS' new ProEficient-*Plus*™ dual-band power amplifiers set the standard for performance with industry-leading efficiency at across all power levels for greater talk-time and longer data use. Many of our dual-band solutions are optimized for use with average power tracking (APT) to further increase efficiency and reduce current consumption.

- **ProEficient-*Plus*™ technology** to deliver the industry's highest level of combined efficiency for longer battery-life
- **Two independent amplification chains in a compact package** to provide outstanding performance for each band and also save space
- **Internal voltage regulation and integrated DC blocks on RF ports** to help reduce PCB space requirements

Dual-Band Power Amplifiers

Frequency 1 (MHz)	Frequency 2 (MHz)	UMTS Bands	CDMA Bands	Application	Technology	Power Modes	Package (mm)	Features	Part Number
814 - 849	1850 - 1915	2, 5, 25, 26	0, 1, 10, 14	LTE, CDMA/ EVDO	ProEficient-*Plus*	2	3 x 4	APT Compliant	ALT6765
824 - 849	1850 - 1915	2, 5	0, 1, 14	WCDMA/HSPA, CDMA/EVDO	ProEficient-*Plus*	2	3 x 4	APT Compliant	AWT6755
824 - 849	1710 - 1785	4, 5	0, 4	WCDMA/HSPA, CDMA/EVDO	ProEficient-*Plus*	2	3 x 4	APT Compliant	AWT6754
816 - 849	1850 - 1915		0, 1, 10, 14	CDMA/ EVDO	ProEficient-*Plus*	2	3 x 4	APT Compliant	AWC6382
824 – 849	1920 - 1980	1, 5	0, 6	WCDMA/HSPA, CDMA/EVDO	ProEficient-*Plus*	2	3 x 4	APT Compliant	AWT6756
880 - 915	1920 - 1980	1, 8		WCDMA/ HSPA	ProVantage	2	3 x 4	APT Compliant	AWT6761
880 - 915	1920 - 1980	1, 8	6	WCDMA/HSPA, CDMA/EVDO	ProEficient-*Plus*	2	3 x 4	APT Compliant	AWT6751
2300 - 2400	2545 - 2620	38, 40		TD LTE	ProVantage	2	3 x 4	APT Compliant	ALT6758

Multiband Power Amplifiers

Compact and Efficient Solutions that Save Space and Extend Battery-Life in Multiband Devices

Our multiband power amplifiers provide a compelling path for wireless devices that support several frequencies. These solutions deliver industry-leading efficiency in a single module solution. Our multimode multiband power amplifiers offer exceptional performance for quad-band GSM/EDGE and dual-band WCDMA/LTE mobile applications. This world-class combination of performance and integration helps extend battery life and reduce RF space requirements in handsets, smart phones, tablets, netbooks, and notebooks.

- **Compact packages with integrated voltage regulator and high directivity couplers** to save valuable PCB space
- **Separated single-ended RF chains** to deliver optimal performance in each band and mode
- **Exceptional linearity, critical harmonic, noise and intermodulation performance** to ensure high throughput and signal integrity

Multiband Power Amplifiers

UMTS Bands	CDMA Bands	GSM Bands	Application	Power Modes	Package (mm)	Features	Part Number
1, 2, 3, 4, 5, 8, 9, 10, 18, 19, 20, 25, 26	0, 1, 4, 6, 8, 10, 14G, 15		LTE, CDMA/ EVDO, WCD-MA/HSPA	2	5 x 7	APT Compliant	ALT6526
1, 5, 6, 18, 19, 26	0, 6, 10	850, 900, 1800, 1900	LTE, CDMA/ EVDO, WCD-MA/HSPA, GSM/EDGE	3	5 x 7.5	APT Compliant	ALT6181

ANADIGICS

Your RF Advantage

At ANADIGICS, our singular focus is developing best-in-class RF solutions that deliver a competitive edge. Our exceptional team of RF designers continuously innovates to create next-generation products that provide measurably superior performance. These performance advantages are backed by our outstanding sales and applications support teams to help you reduce time-to-market and achieve your design goals. So, whether you are trying to extend coverage range, ensure optimal thermal design, or achieve greater throughput, trust ANADIGICS for your next project.

The ANADIGICS Advantage

- Industry-Leading RF Performance
- World-Class RF Integration
- Advanced Process Technology
- Innovative Design Techniques
- Manufacturing Prowess
- Applications Expertise
- Global Presence

Global Headquarters
Warren, NJ, USA
Phone: 1.908.668.5000
Fax: 1.908.668.5086

Shanghai, China
Phone: +86.21.5396.6399
Fax: +86.21.5396.6399 *211

Shenzhen, China
Phone: +86.755.8280.5868
Fax: +86.755.8280.5867

Tokyo, Japan
Phone: +81.3.5326.3053
Fax: +81.3.5326.3001

Seoul, South Korea
Phone: +82.31.709.6941
Fax: +82.31.709.6942

Taipei, Taiwan
Phone: +866.2.8751.2155
Fax: +886.2.2658.2276

San Diego, CA, USA
Phone: 1.858.638.7261

ANADIGICS
141 Mount Bethel Road
Warren, NJ 07059
www.anadigics.com

No. Cellular-Bro-1303
Supersedes: Cellular-Bro-1301