

# 电子元器件系列

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# ANADIGICS CDMA POWER AMPLIFIER PRODUCTS

# **ANADIGICS CDMA Advantage**

- High linearity
- High efficiency
- High performance
- High reliability

- Low power consumption
- High quality
- Small module packaging
- Easy integration

ANADIGICS has harnessed its wireless design and manufacturing strengths to develop a high performance range of power amplifiers for multi-mode, multi-band CDMA handsets. Manufactured using an advanced InGaP HBT technology, ANADIGICS' power amplifier products offer outstanding reliability, performance stability over temperature, and ruggedness. The CDMA power amplifier modules employ a low power quiescent current mode that is digitally controlled to reduce power drain on the system battery. Packaged in laminate modules, these power amplifiers incorporate 50 Ohm input and output matching networks optimized for output power, linearity, and efficiency.

#### The Benefits for Manufacturers are Clear

High efficiency & low quiescent current

High linearity Small size

Lower cost devices

InGaP HBT

Easier integration

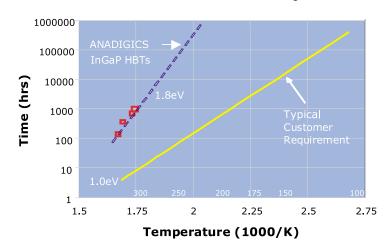
High quality

Fully matched devices

Module Packaging

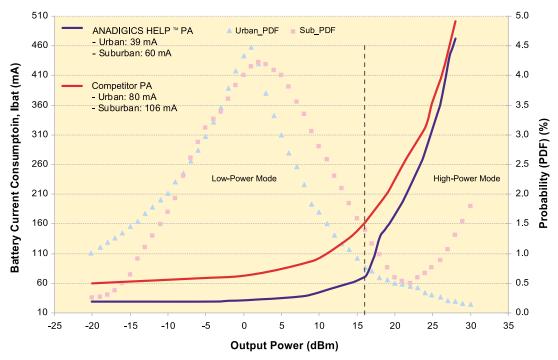
- = Longer talk times and standby times
- Support CDMA 1X Voice and Data applications
- = More features and functionality
- = More competitive handset prices
- Superior performance and reliability
- = Faster time-to-market
- = Fewer field returns
- = Deliver higher handset yields
- Simplify development, faster products to market

### InGAP HBT Reliability



Part #	Application	Package Size (mm)	Frequency (MHz)	Supply (Vcc) Typ	Pout (dBm) Typ	(%)	ACPR
AWT6106	PCS CDMA Handsets Dual Band CDMA Handsets	6x6	1850-1910	3.5	28.5	36	-50@ ±1.25MHz (CDMA) -59@±2.25MHz (CDMA)
AWT6109	Korean Band PCS CDMA Handsets	6x6	1750-1780	3.5	28.5	35	-53@ ±1.25MHz (CDMA) -60@±2.25MHz (CDMA)
AWT6111	Single Mode CDMA Wireless Handsets Dual Mode AMPS/CDMA Wireless Handsets	6x6	824-849	3.5	31.0 (AMPS) 28.5 (CDMA)	47 (AMPS) 37 (CDMA)	-51@ ±885KHz (CDMA) -61@±1.98MHz (CDMA)
AWT6112	Dual Mode AMPS/CDMA Wireless Handsets Single Mode CDMA Wireless Handsets	4x4	824-849	3.4	31.0 (AMPS) 28.0 (CDMA)	50 (AMPS) 38 (CDMA)	-49@±885KHz (CDMA) -57@±1.98MHz (CDMA)
AWT6113	Dual Band CDMA Handsets PCS CDMA Handsets	4x4	1850-1910	3.4	28.0	38	-50@±1.25MHz (CDMA) -61@±2.25MHz (CDMA)
AWT6114	Korean Band PCS CDMA Handsets	4x4	1750-1780	3.4	8.0	36.5	-50@±1.25MHz (CDMA) -57@±2.25MHz (CDMA)
AWT6115 HELP™ PA	Dual Mode AMPS/CDMA Wireless Handsets Single Mode CDMA Wireless Handsets	6x6	824-849	3.5	31.0 (AMPS) 28.0 (CDMA) 16.0 (CDMA)	50 (AMPS) 38 (CDMA) 15 (CDMA)	-48@ ±885KHz (CDMA) -60@±1.98MHz (CDMA)
AWT6116 HELP™ PA	Dual Band CDMA Handsets PCS CDMA Handsets	6x6	1850-1910	3.5	28.0 (CDMA) 16.0 (CDMA)	35 (CDMA) 15 (CDMA)	-48@ ±1.25MHz (AMPS) -60@±2.25MHz (AMPS) -52@±1.25MHz (CDMA) -65@±2.25MHz (CDMA)
AWT6130	Single Mode CDMA Wireless Handsets Dual Mode AMPS/CDMA Wireless Handsets Tri Mode CDMA Wireless Handsets with E911	4x4	824-849	3.5	32.0 (AMPS) 28.5 (CDMA)	48 (AMPS) 37 (CDMA)	-48@ ±885KHz (AMPS) -59@±1.98MHz (AMPS)
AWT6131	Dual Band CDMA Handsets Tri Mode CDMA Handsets with E911	4x4	1850-1910	3.5	28.5	37	-48@ ±1.25MHz (CDMA) -61@±2.25MHz (CDMA)

# **Best-in-Class CDMA Performance**



## AWT6113 - For Dual Mode CDMA Handsets & PCS CDMA Handsets

The AWT6113 offers higher performance for PCS CDMA wireless handset applications in a 55% smaller size package. The 4mm x 4mm amplifier module offers selectable bias modes that optimize efficiency for different output levels. The bias modes and shutdown mode with low leakage current serve to increase handset talk and standby time.



4mm x 4mm

#### AWT6114 – For Korean Band PCS CDMA Handsets



4mm x 4mm

The AWT6114 is a high power high efficiency amplifier module for Korean PCS CDMA wireless handset applications. The device is manufactured on an advanced InGaP HBT MMIC technology offering state-of-the-art reliability, temperature stability, and ruggedness. The 4mm x 4mm amplifier module delivers higher performance in a 55% smaller PCB area than the first generation AWT6109.

# AWT6115 HELP™ PA- For Dual Mode AMPS/CDMA Handsets & PCS CDMA Handsets

The AWT6115 offers High Efficiency at Low Power. The amplifier module was designed for Dual Mode CDMA/AMPS wireless handset applications. The device supports reference voltage ( $V_{\text{REF}}$ ) operation at 2.8V, enabling increased talk-time and standby time. The product delivers a low quiescent current of 35mA to reduce power drain on the battery and a low leakage current when the handset is switched off. Selectable bias modes that optimize efficiency for different output power levels, and a shutdown mode with low leakage current, further increase handset talk and standby time. An integrated power detector simplifies transmitter design by eliminating the need for additional external components. The AWT6115 offers the best low power efficiency available today (15% @  $P_{\text{OUT}}$ = +16 dBm).



6mm x 6mm

#### AWT6116 HELP™ PA- For Dual Mode CDMA Handsets & PCS CDMA Handsets



6mm x 6mm

The AWT6116 PA has been designed by ANADIGICS for use in multi-mode, multi-band CDMA wireless handset applications that support 2.5G CDMA PCS applications. The product delivers a low quiescent current of 27mA to reduce power drain on the battery and a low leakage current when the handset is switched off. Selectable bias modes that optimize efficiency for different output power levels, and a shutdown mode with low leak- age current, further increase handset talk and standby time. An integrated power detector simplifies transmitter design by eliminating the need for additional external components.