



# Amplifiers

## GSM/EDGE Pico-Cell Booster Amplifier for PCS Band DATA SHEET

BDA-1819-10



- Designed for Nano, Pico and Femto base stations
- Provides coverage for the Full PCS Band
- Separate Tx and Rx inputs and a common antenna port
- High linearity
- High reliability

### Overview

CCI's Pico-Cell Booster Amplifier improves the performance of low-power Micro Base Stations (BTS) allowing for cost efficient implementation of high capacity radio networks. By increasing the output power and receive sensitivity of Pico and Micro Base Stations, CCI's Booster Amplifier increases the overall coverage area and improves the performance of the site. An ideal companion to an IP Access Pico Cells, this unit adds Macro-level coverage to the Pico-Cell.

### Technical Description:

The Booster Amplifier is designed for very simple interface ideally suited Pico and Micro base stations without the need for retrofitting the original equipment. Mounting Options include pole mounting on an antenna tower, wall mounted, or placed at any convenient location when site space is limited. The PicoCell Booster Amplifier is designed for compatibility with the latest GSM/EDGE standard and is guaranteed to maintain the integrity of the GSM signal upon amplification. State-of-the-art LDMOS power amplifier devices are utilized in the Power Amplifier (PA), and monolithic Gallium-Arsenide technology for low-noise receive amplification, with particular emphasis on low system group delay to minimize the Bit-Error-Rate (BER) of digital transmissions.

The Booster Amplifier consists of a single compact unit that can be easily installed at a new or existing BTS site. The unit is housed in a moisture resistant cast enclosure suitable for indoor installations. It contains low noise receive amplifiers, a GSM optimized transmit power amplifier, inter-modulation level control circuitry, high-power duplexers, and an integrated power supply to power the unit. A full duplex version is also available that has combined transmit and receive inputs with a common antenna port.



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## GSM/EDGE Pico-Cell Booster Amplifier for PCS Band SPECIFICATIONS

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### Electrical

RF Parameters	Uplink	Downlink
Operating Frequency Range	1850 - 1910 MHz	1930 - 1990 MHz
System Gain	8 dB	25 dB
System Noise Figure	2.5 dB max.	NA
System Group Delay	180 nS max.	180 nS max.
Pass-Band Ripple	±0.5 dB max.	±0.5 dB max.
Output Third Order Intercept Point	+27 dB min.	+52 dB min.
Maximum GSM Output Power	+15 dBm min.	+40 dBm (10 W) min.
Uplink/Downlink Isolation	80 dB	
Operating Voltage	115/220 VAC or optional 24-30 VDC	
Operating Temperature	-25°C to +50°C ambient	

### Mechanical

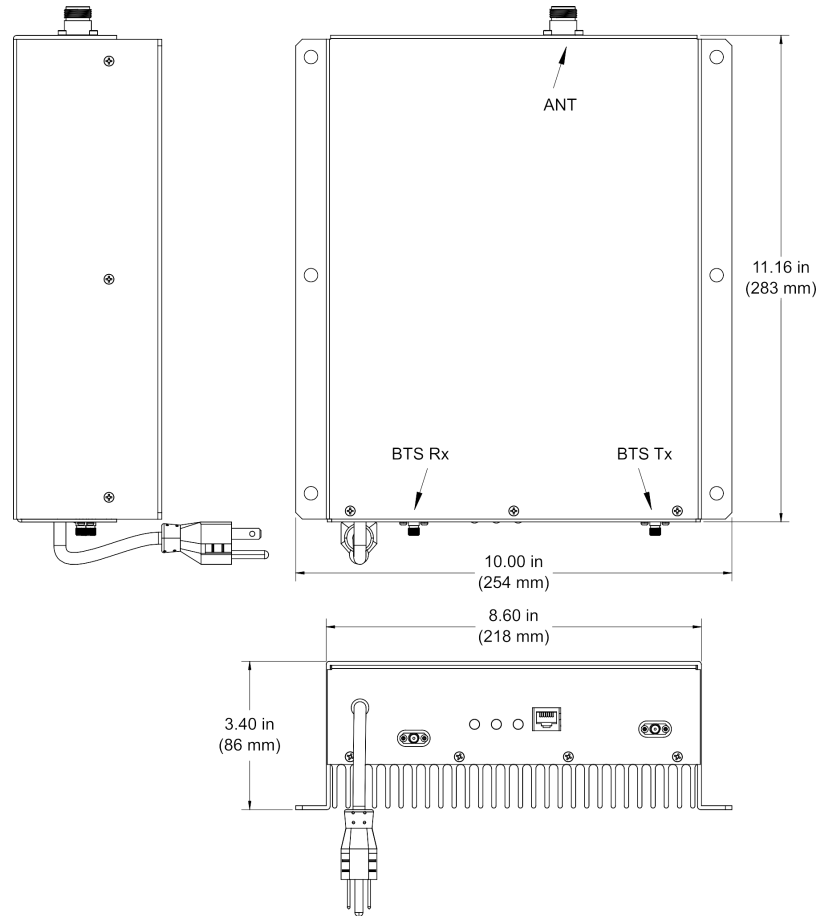
Connectors	Type N Antenna, 2 × SMA (TX & RX)
Enclosure	Single Cast Unit, Wall Mount
Dimensions (W × D × H)	10.0 × 11.16 × 3.40 in. (254 × 283.5 × 86.4 mm)
Weight	12.0 lbs (5.4 kg)
Mounting	Mounting ears for wall mount installation



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BDA-1819-10 Outline Drawing

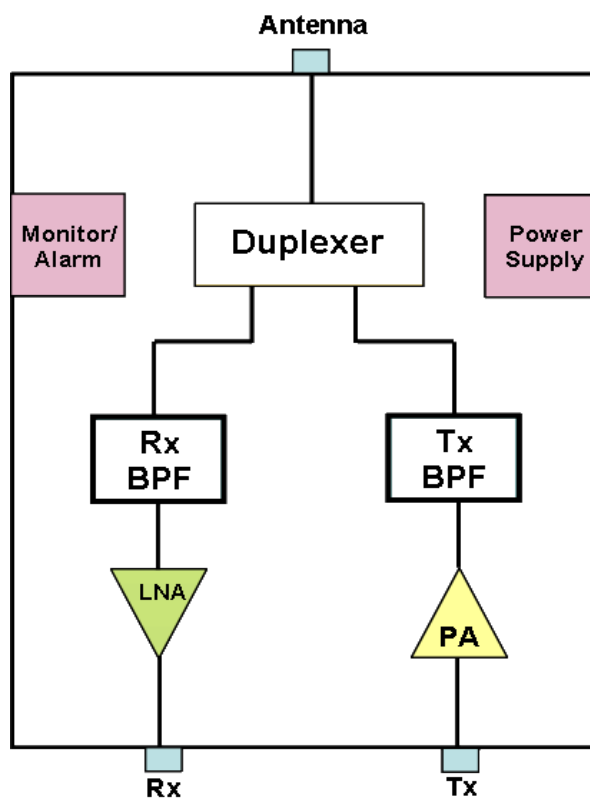


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### Block Diagram



BDA-1819-10 Block Diagram



# Amplifiers

GSM/EDGE Pico-Cell Booster Amplifier for PCS Band  
ORDERING

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Parts & Accessories

**BDA-1819-10** GSM/EDGE Pico-Cell Booster Amplifier for PCS Band

Options:

- 01 24 - 30 VDC Input
- 02 Full Duplex
- 03 Alternate Up/Down Link Gain (Specify Value)



# Amplifiers

GSM/EDGE Pico-Cell Booster Amplifier for PCS Band  
STANDARDS &  
CERTIFICATIONS

BDA-1819-10

Certifications

Federal Communication Commission (FCC) Part 15 Class B, CE, CSA US