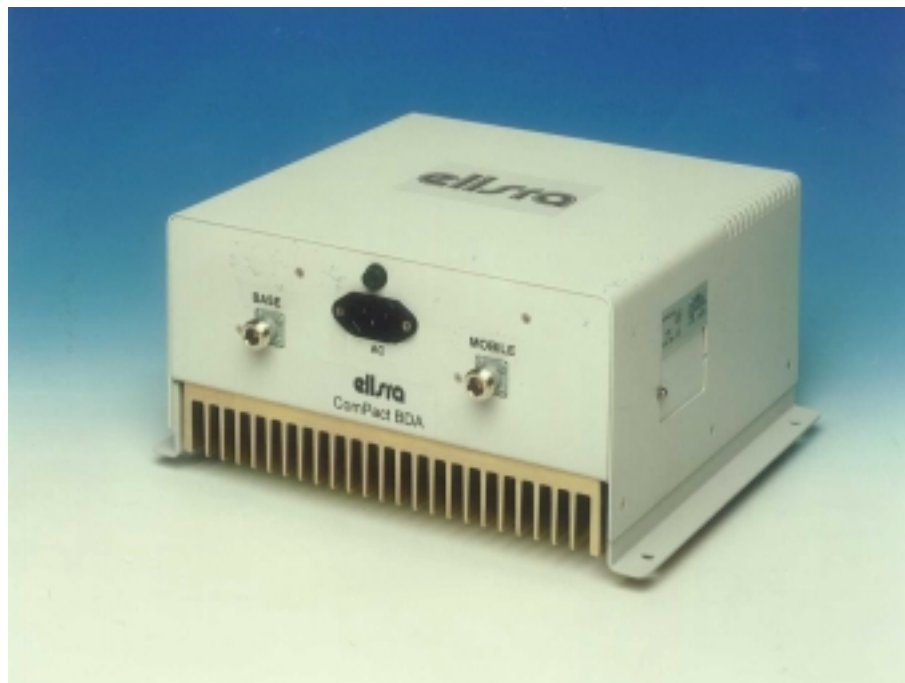


SPECIFICATIONS FOR  
COMPACT Bi DIRECTIONAL AMPLIFIER  
(CBDA)  
WITH AGC& MGC  
MODEL:MW-CBDA-ESMR-10W80-A



## **BDA OVERVIEW:**

The Compact Bi-Directional Amplifier (CBDA) assembly provides an exceptional repeater/booster performances to extend the coverage area of radio communications in buildings and RF shielded environments.

Features such as high linearity power amplifiers are contributing for the overall improved system linearity performances. The unit is based on a duplexed path configuration, having sharp out of band attenuation for improved isolation between the receiving and transmitting paths.

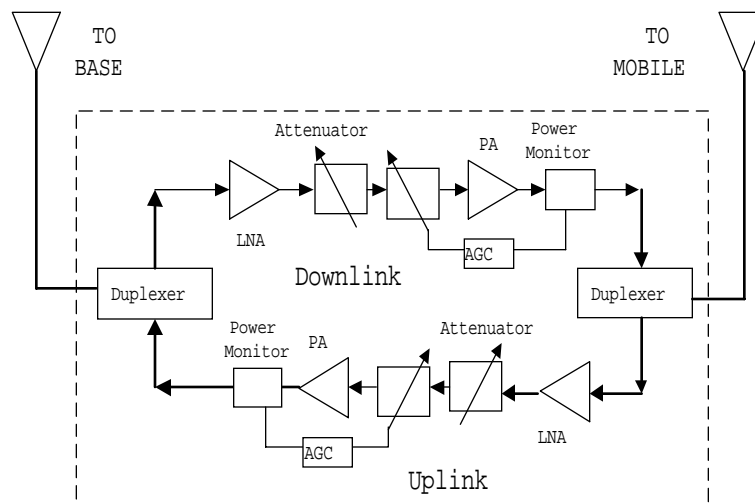
## **BLOCK DIAGRAM DESCRIPTION:**

The CBDA Downlink path receives the RF signals from base station amplifies them and transmits them to the subscriber. The BDA Uplink path receives the RF signals from the subscriber amplifies them and transmits them to the base station. Two duplexers frequency separate the signals to the proper amplifying path and isolate the two signals.

For each path two amplifiers do the path signal amplification; a low noise amplifier (LNA) and a high power amplifier. The low noise amplifier has a 30 dB step attenuator at its output. The step attenuator is used to set the BDA repeater gain.

The power amplifiers in the BDA have an AGC option switch. When switched on, the AGC circuit limits the amplifier output power.

The AGC amplifier has a Power LED lamp that illuminates when the output power has reached the preset power limit.



**BDA RF BLOCK DIAGRAM**

## **ELECTRICAL SPECIFICATIONS:**

Frequency Range (MHz)	Down Link (Base to Mobile): 851 - 866 Up Link (Mobile to Base) : 806 - 821
Passband Gain @Min attenuation	80 dB nominal
Passband Ripple	+/- 1.5 dB max
Manual Attenuation Range	0 to 30 dB in 2 dB steps
Isolation between up and down link	90 dB typical
Noise Figure	6.0 dB max
Amplifier Power Output @1 dB Compression	Down Link: 10 Watts minimum Up Link : 1 Watt minimum
3rd Order output Intercept point	Down Link: +50 dBm typical Up Link : +45 dBm typical
Impedance level	50 ohms
V.S.W.R In/Out	1.5 : 1 max
AGC Attenuation Range	25 dB typical
AGC Factory Power Preset @ Uplink @Downlink	+24 dBm nom. +30 dBm nom.
Power Supply	: 110/220V AC, 50-60 Hz

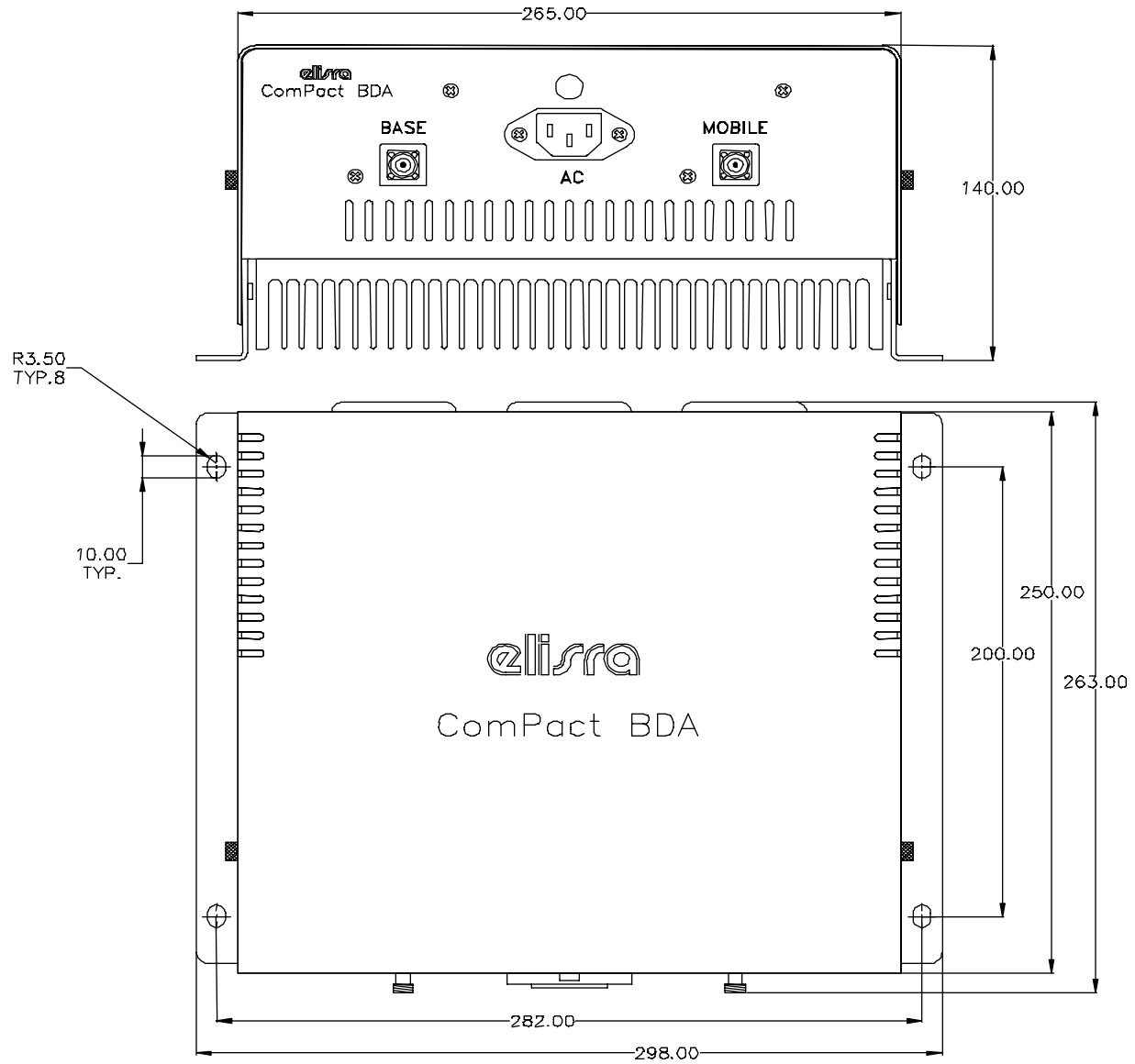
*\* same specifications for both paths unless specified.*

## **MECHANICAL SPECIFICATIONS:**

Size mm(Inch) : 265(10.4) x 250(9.8) x140(5.5)  
 RF Connectors : N-type Female  
 Weight : 9 kg. Approx.

## **ENVIROMENTAL CONDITIONS:**

Operating temperature : - 30°C to + 50°C  
 Storage temperature : - 50°C to + 90°C



## MECHANICAL OUTLINE