# 150W/200W/250W C-Band Hubmount SSPA/ SSPB (BUC) Super Compact TT Series GaN Technology

*SSPA AWMAg-C TT series*
*SSPB (BUC) SSPBMg-C TT series*

## Features

- Full range of output power of 150W to 250W in a compact single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or optional Ethernet port
- Built-in Forward precision powering metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Detachable power supply module
- Weatherproof construction
- CE marking

## Options

- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port
- External Harmonic Filter

## Accessories

- Mounting kits
- Remote M&C panel with optional SNMP
- Handheld terminal
- Flexible and rigid waveguides
- Mounting frames
- High power terminations
- External Harmonics reject filter (-65dBc)

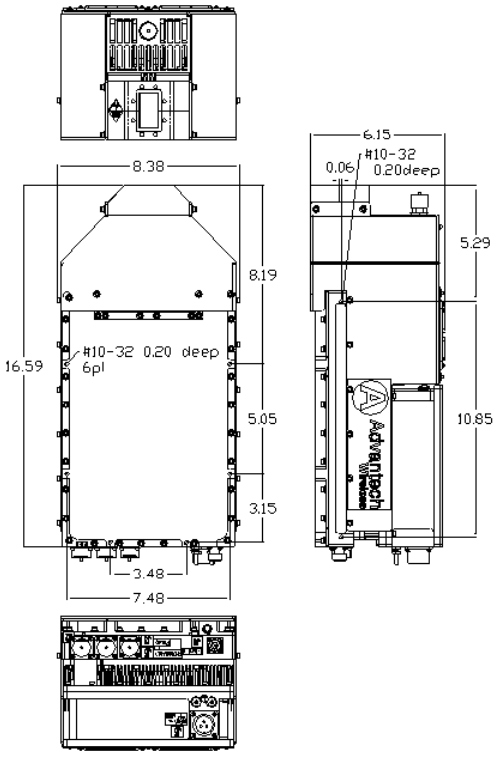


Figure 1: 200W Outline

## Overview

The new Super Compact TT-Series C-Band SSPA/BUCs provide highest power density in the industry. Combined with the traditional Advantech Wireless' features, these new series of BUCs provide the ultimate in performance, reliability, and convenience.

# 150W/200W/250W C-Band Hubmount SSPA/SSPB GaN Technology

Advantech Wireless

| Technical specifications | | | |
|---|---|---|---|
| Output Power | 150W | 200W | 250W |
| $P_{SAT\ (typ.)}$ | +52.0 dBm | +53.0 dBm | +54.0 dBm |
| $P_{LINEAR}$ is the maximum combined transmit power of two equal amplitude continuous wave (CW) carriers 5MHz apart, when the third order intermodulation product power is -25dB relative to the combined power of the two CW carriers. | +49.0 dBm | +50.0 dBm | +51.0 dBm |
| Operating Frequency | 5.85 – 6.425 GHz / optional 5.85 - 6.725 GHz | | |
| L-Band input (BUC) | 950 – 1525 MHz / 950 - 1825 MHz | | |
| Gain | 75dB min (for SSPB) 65dB min (for SSPA) | | |
| Gain adjustment range | 20 dB in 0.1 dB steps | | |
| Gain flatness over full band | 3.0 dB over 500Mhz for SSPA, 4 dB over 500 MHz p-p max for SSPB (BUC) | | |
| Gain slope over 40 MHz | ± 0.5 dB max | | |
| Gain variation over temperature | ± 1.5 dB max | | |
| Input Impedance and VSWR | 50 Ω 1.5:1 | | |
| Output VSWR | 1.3:1 | | |
| Noise power density | -75 dBm/Hz in Transmit Band,<br>-135 dBm/Hz in Receive Band (3.4GHz – 4.2 GHz) | | |
| Spurious at $P_{LINEAR}$ | -55 dBc max | | |
| Harmonics | - 35 dBc at $P_{LINEAR}$ | | |
| AM/PM conversion | 1.0°/dB at $P_{LINEAR}$ | | |
| Group delay | Ripple 1 nsec p-p max over any 40 MHz band | | |
| SSPB (BUC) | | | |
| Local Oscillator freq. | 4.9 GHz | | |
| Internal Reference frequency (optional) | 10 MHz Aging/day $\pm 2^{-10}$<br>Aging/year $\pm 5^{-8}$<br>Stability $\pm 2^{-8}$ over temp range | | |
| Phase Noise | -53 dBc/Hz at 10Hz -90 dBc/Hz at 10 kHz<br>-70 dBc/Hz at 100Hz -100 dBc/Hz at 100 kHz<br>-80 dBc/Hz at 1000Hz | | |
| External Reference<br><br>Frequency phase noise (max) | 10 MHz<br>-120 dBc/Hz at 10Hz -155 dBc/Hz at 10 kHz<br>-135 dBc/Hz at 100Hz -160 dBc/Hz at 100 kHz<br>-150 dBc/Hz at 1000Hz | | |
| Weight & Dimensions | | | |
| Dimensions (L x W x H) | 16.6" x 8.4" x 6.15"<br>(422 x 213 x 156 mm) | | |
| Weight | 24.2 lbs. (11 kg) | | |
| AC input voltage | 90 to 264 V AC (47 – 63 Hz) Power Factor 0.95 min. | | |
| Power consumption (nominal) | 700W at $P_{LINEAR}$<br>850W at $P_{SAT}$ | | |
| Interfaces | Input (RF or L-Band) N type female AC line MS3102 type<br>Output Sample Port N type female RF output CPR137<br>RS485/RS232 and Ethernet (optional) MS3112 type | | |
| Environmental | Temperature Operating -30ºC to +55 ºC<br>Optional -40ºC to +55 ºC<br>Storage -55ºC to +85 ºC<br>Humidity 100% condensing<br>Altitude 10,000' AMSL, de-rated by 2 ºC/1000> from AMSL | | |


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