

200W C-Band BUC/SSPB/SSPA Second Generation GaN Technology

SSPA	AWMAG-C	TT series
SSPB (BUC)	SSPBMg-C	TT series

Features

- Full range of output power of 200W 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

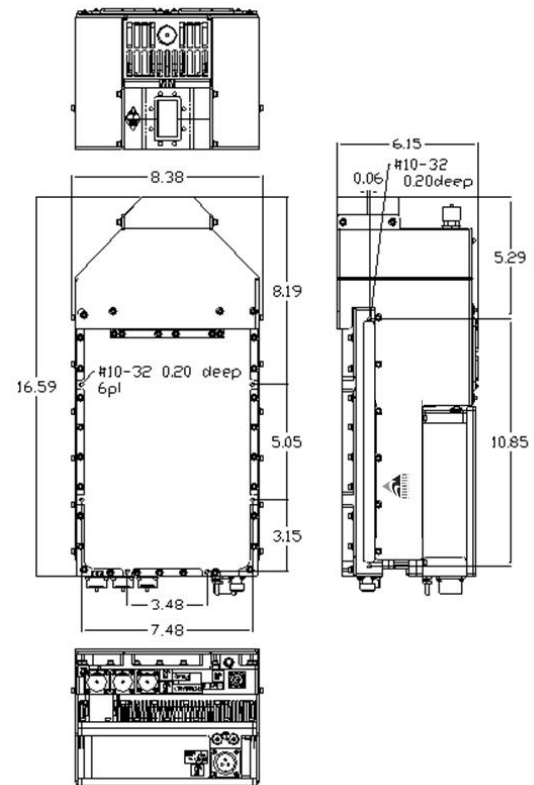
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port
- External Harmonic Filter

Accessories

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

Overview

The 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.



200W C-Band BUC/ SSPB/ SSPA Second Generation GaN Technology

Technical Specifications	
	200W
P_{SAT} (typ.)	+53.0 dBm
Linear Output power, P_{LINEAR}	+50.0 dBm*
	P_{LINEAR} is the power at which the IMD=-25 dBc for two CW signals 5 MHz apart and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for a single QPSK/OQPSK/8PSK signal
Operating Frequency	5.85 – 6.425 GHz / optional 5.85 - 6.725 GHz / 6.725 – 7.025GHz
L-Band input (BUC)	950 – 1525 MHz / 950 - 1825 MHz / 965 – 1265 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, -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 for 5.85 – 6.425 GHz or 5.85 - 6.725 GHz 5.76 GHz for 6.725 – 7.025GHz
Internal Reference frequency (optional)	10 MHz Aging/day $\pm 2 \times 10^{-10}$ Aging/year $\pm 5 \times 10^{-8}$ Stability $\pm 2 \times 10^{-8}$ over temp range
Phase Noise	-53 dBc/Hz at 10Hz -83 dBc/Hz at 10 kHz -63 dBc/Hz at 100Hz -93 dBc/Hz at 100 kHz -73 dBc/Hz at 1000Hz
External Reference Frequency phase noise (max)	10 MHz -120 dBc/Hz at 10Hz -155 dBc/Hz at 10 kHz -135 dBc/Hz at 100Hz -160 dBc/Hz at 100 kHz -150 dBc/Hz at 1000Hz
Weight & Dimensions	
Dimensions (L x W x H)	16.6" x 8.4" x 6.15" (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} 850W at P_{SAT}
Interfaces	Input (RF or L-Band): N type female AC line: MS3102 type Output Sample Port: N type female RF output: CPR137 RS485/RS232 and Ethernet (optional): MS3112 type
Environmental	Temperature Operating -30°C to +55 °C Option 1 -40°C to +55 °C Option 2 -50°C to +65 °C Storage -55°C to +85 °C Humidity 100% condensing Altitude 10,000' AMSL, de-rated by 2 °C/1000' from AMSL

*Linearizer required

**No options for Bands. Only 5.85 – 6.425 GHz

Ref.: PB-SSPBMg-2G-C-200W-19109

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