



SSPA AWMA-K 4200-G series
SSPB (BUC) SSPBM-K 4200-G series

Features

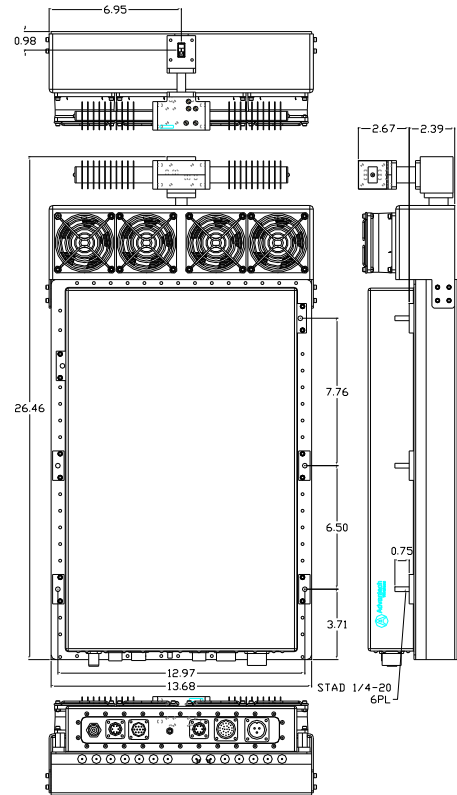
- Full range of output power of 400W in a single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or Ethernet port
- Built-in Forward and Reflected precision power metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Built-in 70 dB Receive Reject Filter
- 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

Accessories

- Mounting kits
- Remote M&C panel with optional SNMP
- Handheld terminal
- Flexible and rigid waveguides
- Mounting frames



Overview

Based on GaN technology the new G-Series Ku-Band BUCs provide high power density in a compact size. Combined with the traditional Advantech features, these new series of BUCs provide the ultimate in performance and convenience.

400W Ku-Band Hubmount SSPA/ SSPB

General Specifications

| | KS | KX |
|--|--|---|
| Operating Frequency | 14.0 – 14.5 GHz | 13.75 – 14.5 GHz |
| L-Band input (BUC) | 950 – 1450 MHz | 950 – 1700 MHz |
| Output Power | P_{SAT} , typ P_{LINEAR} | P_{SAT} , typ P_{LINEAR} |
| | +56.0dBm +53.0 dBm | +55.5 dBm +52.5 dBm |
| Gain | P_{LINEAR} is the power at which the IMD specs are met and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for QPSK/OQPSK/8PSK modulation QPSK/OQPSK/8PSK modulation | |
| | SSPA SSPB (BUC) | 68 ± 3 dB 78 ± 3 dB |
| Gain adjustment range | 20 dB in 0.1 dB steps | |
| Gain flatness over full band | SSPA 2dB p-p max | SSPB (BUC) 3 dB p-p max (KS); 4dB p-p (KX) |
| Gain slope over 40 MHz | ± 0.3 dB max | SSPB (BUC) ± 0.5 dB max |
| Gain variation over temperature | ± 1.5 dB max | |
| Input Impedance and VSWR | 50 Ω | SSPA 1.3:1 SSPB (BUC) 1.4:1 |
| Output VSWR | 1.3:1 | |
| Noise power density | -80 dBm/Hz in Transmit Band, -150 dBm/Hz in Receive Band (10.95 GHz – 12.75 GHz) | |
| Spurious at P_{LINEAR} 1 | SSPA: -65 dBc max | SSPB (BUC): -55 dBc max |
| Harmonics | -50 dBc @ P_{LINEAR} | |
| AM/PM conversion | <2.0°/dB P_{LINEAR} | |
| Third order intermod (two tones) | -25 dBc two signal 5 MHz apart at P_{LINEAR} | |
| Group delay | Ripple 1 nsec p-p max over any 40 MHz band | |
| Residual AM Noise | 0 – 10 kHz -45 dBc 10 kHz – 500 kHz -20 (1.25 + log F) dBc F = Frequency in kHz 500 kHz – 1 MHz -80 dBc | |
| SSPB (BUC) | | |
| Local Oscillator freq. | 13.05 GHz | 12.8 GHz |
| Internal Reference frequency (optional) | 10 MHz | |
| | Aging/day ±2 ⁻¹⁰ Aging/year ±5 ⁻⁸ Stability ±2 ⁻⁸ over temp range | |
| Phase Noise | -53 dBc/Hz at 10Hz -63 dBc/Hz at 100Hz -73 dBc/Hz at 1000Hz | -83 dBc/Hz at 10 kHz -93 dBc/Hz at 100 kHz |
| External Reference Frequency phase noise (max) | 10 MHz -120 dBc/Hz at 10Hz -135 dBc/Hz at 100Hz -150 dBc/Hz at 1000Hz | -155 dBc/Hz at 10 kHz -160 dBc/Hz at 100 kHz |
| Weight & Dimensions | | |
| Dimensions | L x W x H 26.4" x 13.7" x 5.0" (670 x 348 x 127 mm)) | |
| Weight | 53 lbs (24 kg) | |
| AC input voltage | 190 – 265 VAC (47-63 Hz) | |
| Power consumption | 1400W at P_{LINEAR} 1900W at P_{SAT} | |
| Interfaces | Input (RF or L-Band) - N type female Output Sample Port - N type female RS485/Ethernet | AC line - MS3102 type RF output - WR75 Cover MS3112 type |
| Environmental | Temperature | Operating -30°C to +55 °C Option 1 -40°C to +55 °C Option 2 -50°C to +50 °C Storage -55°C to +85 °C |
| | Humidity | 100% condensing |
| | Altitude | 10,000' AMSL, derated by 2 °C/1000' from AMSL |

NORTH AMERICA
USA
Tel: +1 678 889-1831
Fax: +1 678 889-1756
info.usa@advantechwireless.com

CANADA
Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.canada@advantechwireless.com

EUROPE
UNITED KINGDOM
Tel: +44 1480 357 600
Fax: +44 1480 357 601
info.uk@advantechwireless.com

RUSSIA & CIS
Tel: +7 495 971 59 18
info.russia@advantechwireless.com

SOUTH AMERICA
USA
Tel: +1 678 889-1831
Fax: +1 678 889-1756
info.latam@advantechwireless.com

BRAZIL
Tel: +55 11 3054 5701
Fax: +55 11 3054 5701
info.brazil@advantechwireless.com

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