

150W / 200W / 250W Ku-Band Indoor BUC/SSPB/SSPA Second Generation GaN Technology



SapphireBlu™ Super Compact

| | | |
|------------|---------|-----------|
| SSPA | ARMAg-K | SG series |
| SSPB (BUC) | ARMUg-K | SG series |

Features

- 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
- 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
- Detachable power supply module
- 19" Rackmount, 4RU, 28" deep
- CE marking

Options

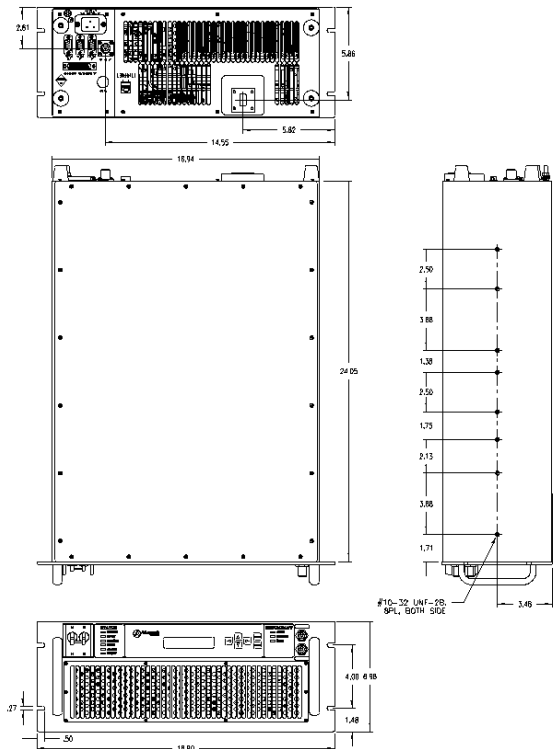
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

Accessories

- Mounting slides
- Remote M&C panel with optional SNMP
- Flexible and rigid waveguides

Overview

The new Super Compact SG Series Ku-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 and convenience.



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| Technical Specifications | | | | | |
|--|--|--|--------------------------|------------------------|-----------------------|
| Output Power | 150W | | 200W | | 250W |
| P_{SAT} (nominal) | +52.0 dBm | | +53.0 dBm | | +54.0 dBm |
| P_{LINEAR} | +50.0 dBm | | +51.0 dBm | | +51.5 dBm |
| Operating Frequency | Ku | 14.0 – 14.500 GHz | KX | 13.75 – 14.5 GHz | |
| L-Band input (BUC) | Ku | 950 – 1450 MHz | KX | 950 – 1700 MHz | |
| Gain | SSPA | 64 dB | SSPB (BUC) | 74 +/- 3 dB | |
| Gain adjustment range | 20 dB in 0.1 dB steps | | | | |
| Gain flatness over full band | SSPA 2dB p-p max SSPB (BUC) 4 dB p-p max | | | | |
| 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 | 1.25:1 | | | | |
| Noise power density | -75 dBm/Hz in Transmit Band, -150 dBm/Hz in Receive Band (10.95GHz – 12.75 GHz) | | | | |
| Spurious at $P_{LINEAR1}$ | SSPA: -65 dBc max SSPB (BUC): -55 dBc max | | | | |
| Harmonics | -50 dBc at P_{LINEAR} | | | | |
| AM/PM conversion | 1°/dB at P_{LINEAR} | | | | |
| Third order intermod. (two tones) | -25 dBc two signal 5 MHz apart at P_{LINEAR} relative to each carrier | | | | |
| Spectral Regrowth | -30 dBc at P_{LINEAR} (for QPSK at 1.5 x symbol rate and OQPSK at 1,0 x symbol rate) | | | | |
| 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. | Ku –13.050 GHz | | KX – 12.800 GHz | | |
| Internal Reference frequency (optional) | 10 MHz | | 10 MHz | | |
| Phase Noise | Aging/day | $\pm 2 \times 10^{-10}$ | Aging/year | $\pm 5 \times 10^{-8}$ | |
| | Stability | $\pm 2 \times 10^{-8}$ over temp range | | | |
| External Reference Frequency phase noise (max) | -53 dBc/Hz at 10 kHz | -73 dBc/Hz at 1000Hz | | -93 dBc/Hz at 100 kHz | |
| | -63 dBc/Hz at 100Hz | -83 dBc/Hz at 10 kHz | | | |
| Weight & Dimensions | 19" rackmount 4RU high , 28" deep | | | | |
| Dimensions (L x W x H) | 66 lbs (30kg) | | | | |
| Weight | 90-265 VAC (47 – 63 Hz) PF 0.95 min | | | | |
| AC input voltage | 800W at P_{LINEAR} | | 950W at P_{LINEAR} | | 1200W at P_{LINEAR} |
| Power consumption (nominal) | 1000W at P_{SAT} | | 1100W at P_{SAT} | | 1500W at P_{SAT} |
| Interfaces | Input (RF or L-Band): N type female | | AC line: IEC 320 Inlet | | |
| Environmental | Output Sample Port: N type female | | RF output: WR75 | | |
| | RS485/RS232/Ethernet DB9 / RJ45 | | | | |
| Temperature | Operating | | 0°C to +50 °C | | |
| | Storage | | -55°C to +85 °C | | |
| | Humidity | | 5% to 95% non condensing | | |
| Altitude | 10,000' AMSL, de-rated by 2 °C/1000' from AMSL | | | | |

Ref.: PB-SSPBg-2G-Ku-Rack-150W-250W-001-18219

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