

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

Phoenix-Line

SSPBMg 3200-G series
AWMA 3200-G series
MIL-STD-188-164 Compliant

Features

- Full range of output power of 150W, 200W and 250W in a single package
- SSPA or SSPB (BUC) option
- Super High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or 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
- Built-in 70 dB Receive Reject Filter
- Detachable power supply module
- Weatherproof construction



Overview

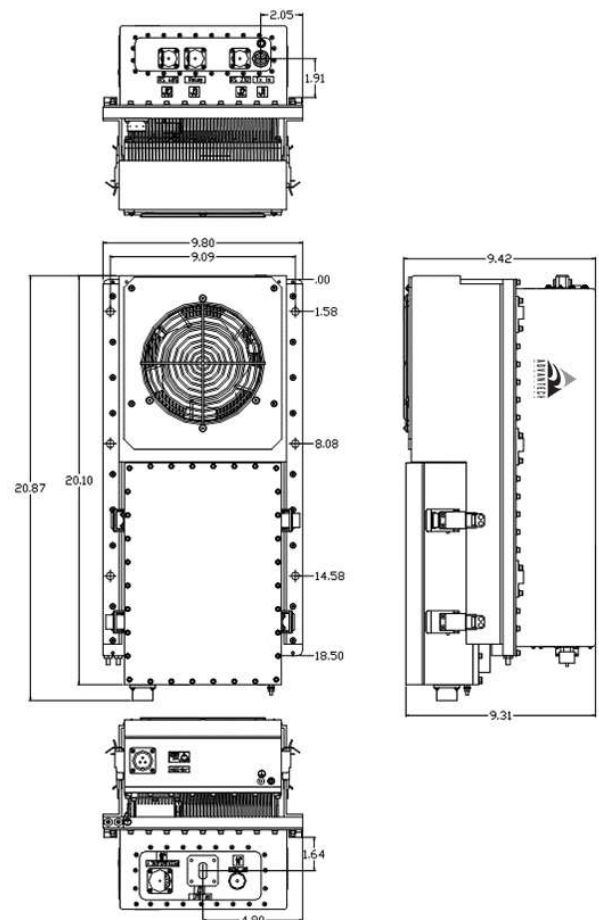
Based on GaN technology the new G-Series Ku-Band BUCs provide high power density in a compact size. Combined with the traditional from Advantech Wireless Technologies, these new series of BUCs and SSPAs provide the ultimate in performance and convenience.

Options

- 1:1 or 1:2 Redundant Configuration
- Internal reference with autosensing
- 70 dB Receive Reject Filter (external)
- Discrete alarm interface

Accessories

- Mounting kits
- External Receive Reject Filter
- Remote M&C panel with optional SNMP
- Flexible and rigid waveguides
- Boom mounting kit
- Replacement fans



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General Specifications		150W	200W	250W
Operating Frequency			KS 14.0 – 14.5 GHz KX 13.75 – 14.5 GHz KL 12.75 – 13.25 GHz	
L-Band input (BUC)			KS 950 – 1450 MHz KX 950 – 1700 MHz KL 950 – 1450 MHz	
Output Power	$P_{SAT}(typical)$ P_{LINEAR}	+52.0 dBm +49.0 dBm	+53.0 dBm +50.0 dBm	+54.0 dBm +50.5 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 tested with a single QPSK, 2MS/s SR, 0.35 roll-off		
Gain	SSPA SSPB (BUC)	62 ± 3 dB, Or optional 72 ± 3 dB 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		1.3:1		
Noise power density		-70 dBm/Hz in Transmit Band, -145 dBm/Hz in Receive Band		
Spurious at $P_{LINEAR 1}$		SSPA: -65 dBc max SSPB (BUC): -55 dBc max		
Harmonics		-60 dBc @ P_{LINEAR}		
AM/PM conversion		<1°/dB P_{LINEAR}		
Third order IMD (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 500 kHz – 1 MHz -80 dBc	F = Frequency in kHz	
SSPB (BUC)				
Local Oscillator freq.		KS 13.05 GHz	KX 12.8 GHz	KL 11.8 GHz
Internal Reference frequency (optional)		10 MHz	Aging/day ±2 × 10 ⁻¹⁰ Aging/year ±5 × 10 ⁻⁸ Stability ±2 × 10 ⁻⁸ over temp range	
Max Phase Noise		-53 dBc/Hz at 10Hz -69 dBc/Hz at 100Hz	-75 dBc/Hz at 1000Hz -90 dBc/Hz at 10 kHz	-105 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 20.1" x 9.8" x 9.8" (510.5x249x249 mm)		
Weight		48 lbs (22 kg)		
AC input voltage		90 – 265 VAC (47-63 Hz)		
Power consumption at P_{Linear}		800W	1200W	1200W
Interfaces		Input (RF or L-Band) Output Sample Port RS485/Ethernet	N type female N type female MS3112 type	AC line MS3102 type RF output WR75 Cover
Environmental		Temperature Humidity Altitude	Operating -30°C to +55 °C Storage -55°C to +85 °C 100% condensing 10,000' AMSL, de-rated by 2 °C/1000' from AMSL	Option 1 -40°C to +55 °C *

*Please consult the factory for optional operation temperature

Ref.: PB-SSPBMg-2G-Ku-150W-200W-250W-22165

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