

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
- 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 50 dB Receive Reject Filter
- Detachable power supply module
- IP 65 compliance



Overview

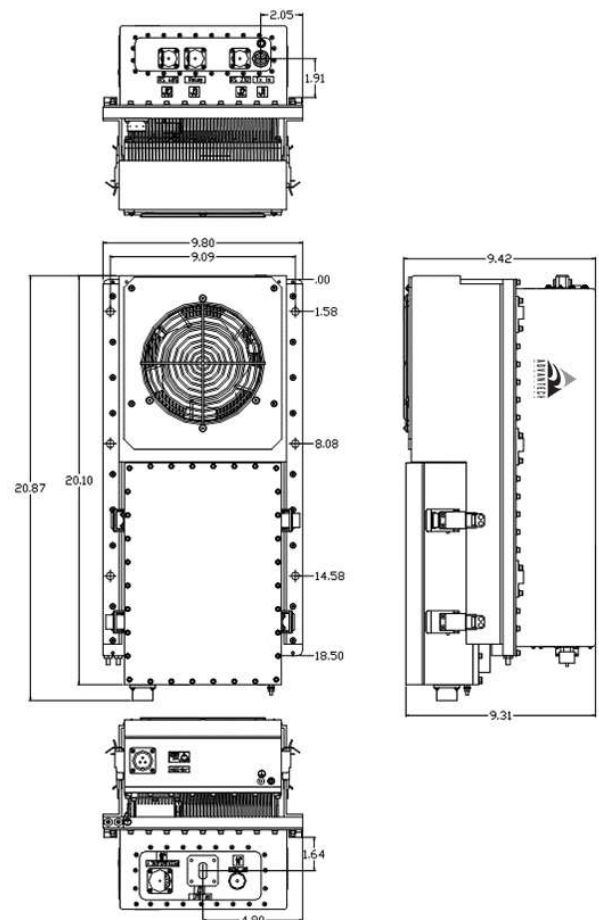
Based on GaN technology the new G-Series Ku-Band BUCs provide high power density in a compact size. Combined with the traditional from Advantech Wireless Technologies, these new series of BUCs and SSPAs provide the ultimate in performance and convenience.

Options

- 1:1 or 1:2 Redundant Configuration
- Internal reference with autosensing
- Discrete alarm interface
- External harmonics filter

Accessories

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



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General Specifications							
Output power		150W		200W		250W	
Operating Frequency							
KS 14.0 – 14.5 GHz		☑		☑		☑	
KX 13.75 – 14.5 GHz		☑		☑		☑	
KL 12.75 – 13.25 GHz		☑		☑		x	
KH 14.5 – 14.8 GHz		☑		☑		x	
L-Band input (BUC)		KS: 950 – 1450 MHz		KX: 950 – 1700 MHz		KL: 950 – 1450 MHz	
KH: 1450 – 1750 MHz							
Output Power	P _{SAT} (typical)	+52.0 dBm		+53.0 dBm		+54.0 dBm	
	P _{LINEAR}	+49.0 dBm		+50.0 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	62 ± 3 dB, Or optional 72 ± 3 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		1.3:1					
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		-45 dBc @ P _{LINEAR} -60 dBc @ P _{LINEAR} (with an optional external harmonics filter)					
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		-20 (1.25 + log F) dBc F = Frequency in kHz			
		10 kHz – 500 kHz		-80 dBc			
		500 kHz – 1 MHz					
SSPB (BUC)							
Local Oscillator freq.		KS: 13.05 GHz		KX: 12.8 GHz		KL: 11.8 GHz	
KH: 13.05 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		1400W	
Interfaces		Input (RF or L-Band) N type female		AC line MS3102 type			
		Output Sample Port N type female		RF output WR75 Cover			
		RS485/Ethernet MS3112 type					
Environmental		Temperature		Operating -30°C to +55 °C		Option 1 -40°C to +55 °C *	
				Storage -55°C to +85 °C			
		Humidity		100% condensing			
		Altitude		10,000' AMSL, de-rated by 2 °C/1000' from AMSL			

*Please consult the factory for optional operation temperature

Ref.: PB-SSPBMg-2G-Ku-150W-200W-250W-24086

NORTH AMERICA

USA
info.usa@advantechwireless.com

CANADA
Info.canada@advantechwireless.com

EUROPE

UNITED KINGDOM
info.uk@advantechwireless.com

SOUTH AMERICA

info.latam@advantechwireless.com

BRAZIL
info.brazil@advantechwireless.com

ASIA

info.asia@advantechwireless.com

INDIA
info.india@advantechwireless.com