

25W / 30W / 40W/ 50W Ku-Band BUC/SSPB/SSPA Second Generation GaN Technology

SSPBMg-Ku Band	2200-G series
SSPBMg-KX Band	2200-G series

Features

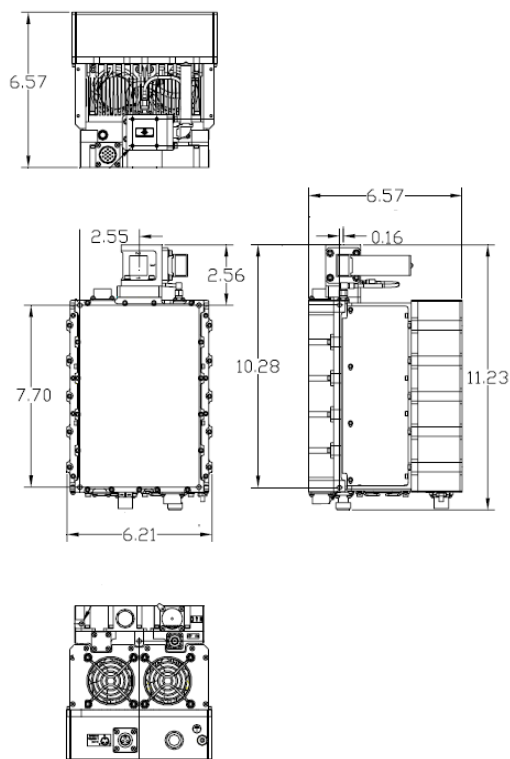
- Output power of 25W to 50W in a single compact package
- High linearity
- Full M&C capability via RS485 or Ethernet port
- Weatherproof construction
- CE marking



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.

The products in the new G-Series Ku-Band BUCs are available as SSPA or SSPB (BUC). The first products available in the new G-Series are for 16W to 200W. The product described in this bulletin is for a 25W-50W BUC.



Accessories

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

Options

- 1:1 or 1:2 Redundant configuration
- Ethernet port
- Internal reference with auto-sensing
- Waveguide Output Isolator
- External RX Reject filter, 35 dBc rejection

Outline



25W / 30W / 40W/ 50W Ku-Band BUC/SSPB/SSPA Second Generation GaN Technology

General Specifications				
	25W	30W	40W	50W
Operating Frequency				
KS-band (14.00 – 14.50 GHz)	✓	✓	✓	✓
KX-band (13.75 – 14.50 GHz)	✓	✓	✓	✓
KL-band (12.75 – 13.25 GHz)	-	✓	✓	✓
L-Band input (BUC)	950 – 1450 MHz (for KS/KL) or 950 – 1700 MHz (for KX)			
Output Power P_{SAT} (typical)	+44.0 dBm	+45.0 dBm	+46.0 dBm	+47.0 dBm
P_{LINEAR} / Equivalent P1dB (dBm)	+40.0 /+43.0	+41.0 /+44.0	+42.0 /+45.0	+43.0 /+46.0
	<small>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</small>			
Gain SSPB (BUC)	64 dB min	65 dB min	66 dB min	68 dB min
Gain SSPA	54 dB min	55 dB min	56 dB min	58 dB min
Gain adjustment range	20 dB in 0.1 dB steps			
Gain flatness over full band	4 dB p-p max			
Gain slope over 40 MHz	1dB p-p max			
Gain variation over temperature	± 1.5 dB max			
Input Impedance and VSWR	50 Ω 1.3:1			
Output VSWR	2:1			
Output VSWR (with optional isolator)	1.25:1			
Noise power density	-80 dBm/Hz in Transmit Band, -150 dBm/Hz in Receive Band (10.95 GHz – 12.75 GHz)			
Spurious	-55 dBc max at P_{LINEAR}			
AM/PM conversion	<1.0°/dB at P_{LINEAR}			
Third order IMD (two tones)	-25 dBc two signal 5 MHz apart with respect to total power = P_{LINEAR}			
Spectral regrowth	-30 dBc @ P_{LINEAR}			
Group delay	Ripple 1 nsec p-p max			
Local Oscillator freq.	13.05 GHz (for KS)	or 12.80 GHz (for KX)	or	11.80 GHz (for KL)
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	10 MHz (Option 1: Internal 10MHz reference; Option 2: Internal 10MHz reference with autosensing)			
Phase noise (max)	-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 11.23"x6.22"x6.57" (285.24 x 158 x 166.9 mm)			
Weight	13.23 lbs (6 kg)			
Input voltage	DC 48V (40v – 60V) AC 90 – 265 VAC (47 – 63 Hz)			
Power consumption (typical)	210W@Psat, 175W@ P_{LINEAR}		280W@Psat, 230W@ P_{LINEAR}	
Interfaces	Input (RF or L-Band): DC line :	N type female MS3102 type	RF output: AC line:	WR75 Grooved MS3102 type
	AC Main Power MS3102, INT 10MHz with Autosensing, Ethernet MS3112, Redundant ready			
Environmental	Temperature	Operating: -30°C to +55°C Storage: -55°C to +85°C	- 40°C to +55°C (Option 1)	- 50°C to +55°C (Option 2)
	Humidity:	100% condensing		
	Altitude:	10,000' AMSL de-rated by 2 °C/1000' from AMSL		

Ref.: PB-SSPBMg-2G-Ku-25W-50W-001-20014

NORTH AMERICA

USA
info.usa@advantechwireless.com

CANADA
Info.canada@advantechwireless.com

EUROPE

UNITED KINGDOM
info.uk@advantechwireless.com

RUSSIA & CIS
info.russia@advantechwireless.com

SOUTH AMERICA

info.latam@advantechwireless.com

BRAZIL
info.brazil@advantechwireless.com

ASIA

info.asia@advantechwireless.com

INDIA
info.india@advantechwireless.com