16W / 20W / 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

Basic

Full Featured

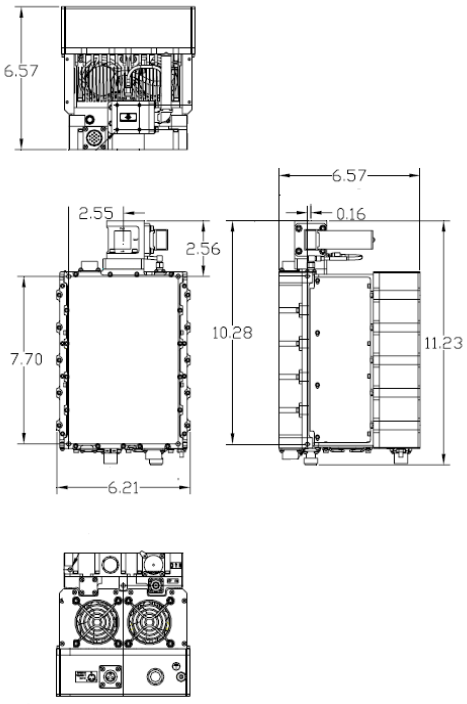
Features

- Output power of 16W 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 16W / 50W BUC.



Outline
Full Featured 50W

Accessories

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

Options

- Ethernet port
- Internal reference with auto-sensing
- Waveguide Output Isolator
- External RX Reject filter, 35 dBc rejection

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General Specifications						
	16W	**20W**	**25W**	**30W**	**40W**	**50W**
Operating Frequency	14.00 – 14.50 GHz or 13.75 – 14.50 GHz					
L-Band input (BUC)	950 – 1450 MHz or 950 – 1700 MHz					
Output Power $P_{SAT\ (typical)}$	+42.0 dBm	+43.0 dBm	+44.0 dBm	+45.0 dBm	+46.0 dBm	+47.0 dBm
P_{LINEAR} / Equivalent P1dB (dBm)	+38.0 /+41.0	+39.0/+42.0	+40.0 /+43.0	+41.0 /+44.0	+42.0 /+45.0	+43.0 /+46.0
	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					
Gain SSPB (BUC)	62 dB min	63 dB min	64 dB min	65 dB min	66 dB min	68 dB min
Gain SSPA	52 dB min	53 dB min	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 or 12.8 GHz					
Phase Noise	-53 dBc/Hz at 10Hz -83 dBc/Hz at 10 kHz -63 dBc/Hz at 100Hz -93 dBc/Hz at 100 kHz -73 dBc/Hz at 1000Hz					
External Reference Frequency	10 MHz Optional; Internal 10MHz reference					
Phase noise (max)	-120 dBc/Hz at 10Hz -155 dBc/Hz at 10 kHz -135 dBc/Hz at 100Hz -160 dBc/Hz at 100 kHz -150 dBc/Hz at 1000Hz					
Weight & Dimensions						
Dimensions	**Basic Model:** L x W x H 8.13”x6.22”x6.09” (206.5x158x154.7 mm) **Full Feature:** L x W x H 11.23”x6.22”x6.57” (285.24x158x166.9 mm)					
Weight	**Basic Model:** 9.2 lbs. (4.2 kg) **Full Featured:** 13.23 (6 kg)					
Input voltage	DC 48V (40v – 60V) AC 90 – 265 VAC (47 – 63 Hz)					
Power consumption (typical)	210W@Psat, 175W@ PLINEAR			280W@Psat, 230W@ PLINEAR		
Interfaces	Input (L-Band) N type female RF output WR75 Grooved DC line MS3102 type AC line MS3102 type					
	Basic Model : DC Main Power MS3102, Serial RS232/RS485 or Ethernet MS3112, External 10 MHz via L-band IF **Full Featured:** AC Main Power MS3102, INT 10MHz with Autosensing, Ethernet MS3112, Redundant ready					
Environmental	Temperature Operating -30°C to +55°C Option - 50°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					

Ref.: PB-SSPBMg-2G-Ku-16W-50W-18221

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