



16W / 20W / 25W / 30W / 40W / 50W  
SSPBMg-K 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

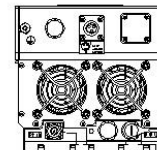
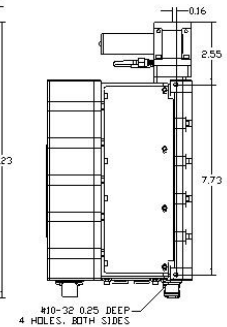
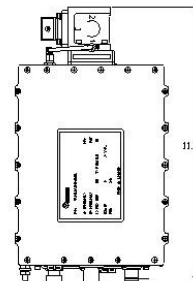
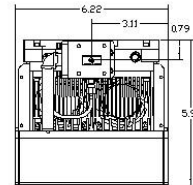
Based on GaN technology the new G-Series Ku-Band BUCs provide high power density in a compact size. Combined with the traditional Advantech features, these new series of BUCs provide the ultimate in performance and convenience. The products in the new G-Series Ku-Band BUCs are available as SSPA or SSPB (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.

### Options

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

### Accessories

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



**Full Featured**

# 16W / 20W / 25W / 30W / 40W/ 50W Ku-Band SSPB GaN



General Specifications		16W	20W	25W	30W	40W	50W
Operating Frequency				KS 14.00 – 14.50 GHz KX 13.75 – 14.50 GHz			
L-Band input (BUC)				KS 950 – 1450 MHz KX 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) SSPA	68 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 dB max					
Gain variation over temperature		± 1.5 dB max					
Input Impedance and VSWR		50 $\Omega$ 1.3:1					
Output VSWR		2:1 (with optional Output 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 <sup>o</sup> /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.		KS 13.05 GHz		KX 12.8 GHz			
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		Optional; Internal 10MHz reference			
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		<b>Basic Model:</b>		L x W x H		8.13"x6.22"x6.09" (206.5x158x154.7 mm)	
		<b>Full Feature:</b>		L x W x H		11.23"x6.22"x5.9" (285.24x158x149.86 mm)	
Weight		<b>Basic Model:</b>		9.2 lbs. (4.2 kg)			
		<b>Full Featured:</b>		13.23 (6 kg)			
Input voltage		DC 48V (40v – 60V)		AC 90 – 265 VAC (47 – 63 Hz)			
Power consumption (typical)		280W@Psat, 230W @ $P_{LINEAR}$					
Interfaces		Input (L-Band)	N type female	RF output	WR75 Grooved		
		DC line	MS3102 type	AC line	MS3102 type		
		<b>Basic Model</b> : DC Main Power MS3102, Serial RS232/RS485 or Ethernet MS3112, External 10 MHz via L-band IF					
		<b>Full Featured:</b> 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					

**NORTH AMERICA**  
**USA**  
Tel: +1 703 659 9796  
Fax: +1 703 635 2212  
info.usa@advantechwireless.com

**CANADA**  
Tel: +1 514 420 0045  
Fax: +1 514 420 0073  
info.canada@advantechwireless.com

**EUROPE**  
**UNITED KINGDOM**  
Tel: +44 1480 357 600  
Fax: +44 1480 357 601  
info.uk@advantechwireless.com

**RUSSIA & CIS**  
Tel: +7 495 971 59 18  
info.russia@advantechwireless.com

**INDIA**  
Tel: +91 33 2415 5922  
info.india@advantechwireless.com

**SOUTH AMERICA**  
Tel: +1 514420 0045  
Fax: +1 514420 0073  
info.latam@advantechwireless.com

**BRAZIL**  
Tel: +55 11 3054 5701  
Fax: +55 11 3054 5701  
info.brazil@advantechwireless.com

An ISO 9001 : 2008 Company



Ref.: PB-SSPBg-Ku-16-20-25-30-50-14203