CPI GaNLink™160 Watt SSPA/BUC

Ka-band

Robust CPI design and manufacturing, combined with plenty of thermal margin, results in a GaN SSPA/BUC that is rock-solid, highly efficient and easy to maintain.

CPI Quality

Based on GaN device technology, the SA/SB52KOA series of GaN amplifiers utilizes proprietary RF techniques to provide high linear power and efficiency in small, lightweight, outdoor packages. This compact GaN HPA can be mounted directly at the antenna for maximum efficiency of operation. Full-featured network and serial interfaces are provided to support monitoring and control of the amplifier.

MCC Technology™

With Multi-Carrier Compatible (MCC) Technology, you can be sure that you'll get the most output power out of your HPA, regardless of how many carriers you are using. Without this feature, there would be no telling how far you'd have to back off your output power to achieve a linear signal.

Global Applications

Perfect for LEO/MEO/GEO systems, Satcom on the Move, VSATs, and antenna-mount applications. Meets Electromagnetic Compatibility Directive 2014/30/EU to satisfy worldwide requirements and is CE-marked.

Worldwide Support

Backed by over 40 years of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes more than 20 regional factory service centers.

GaNLink™ 160 W Ka-band GaN SSPA / BUC, Model SA52KOA / SB52KOA

(image shown may not reflect all configurations)

FEATURES:

- 80 watts of linear output power using MCC Technology
- Exceptional power efficiency
- 30 dB gain adjustment range
- Weatherproof package
- Integrated network and serial M&C interfaces
- SNMP enabled (V1, V2, V3)

OPTIONS:

- Integral dual and tri output band BUCs
- Redundancy switching support
- Open BMIP support
- Keyline
- RF output sample port
- IF input sample port

ACCESSORIES:

- 3 RU controller

Quality Management System - ISO 9001:2015

CE

CPI Communications & Power Industries

www.cpii.com/satcom

GaNLink™ 160 Watt Ka band SSPA/BUC Specification

	SSPA Model SA52KOA	SSPA Model SB52KOA
ELECTRICAL SPECIFICATIONS		
RF Output Frequency	27.5 to 30.0 GHz or 29.0 to 31.0 GHz	27.5 to 30.0 GHz or 29.0 to 31.0 GHz (optional wide-band or multi-band BUCs available in switchable 1 GHz bands)
RF input Frequency	27.5 to 30.0 GHz or 29.0 to 31.0 GHz	950 to 1950 MHz or 1000 to 2000 MHz
Spectral Regrowth (1)	at 100W (50 dBm), -25 dBc at 1.5 SR offset with 8PSK at 1Mb/second, 2/3 FEC (27.5 to 30.0 GHz)	
Spectral Regrowth (2)	at 80W (49 dBm), -25 dBc at 1.0 SR offset with OPSK at 5Mb/second, 1/2 FEC (29.0 to 31.0 GHz)	
Gain	63 dB min; 69 dB max	
Gain Stability **over temp, constant drive** **over 24 hrs., constant temp**	± 1.5 dB max. ±0.25 dB max	± 2.0 dB max. ±0.25 dB max
Gain Flatness	±1.75 dB max. full band; ±1.00 dB max. over any 45 MHz	
Small Signal Gain Slope	±0.04 dB/MHz max.	
Gain Adjustment Range	Up to 30 dB (0.1 dB steps)	
Input VSWR (50 Ω)	1.5:1 max.	
Output VSWR (WR28)	1.3:1 max.	
Load VSWR	1.7:1 max. continuous operation; 1.5:1 max. full spec	
Reference (MUX on IF)	N/A	10 MHz std; other options available
Phase Noise (External Reference)	N/A	-120 dBc/Hz at 10 Hz -140 dBc/Hz at 100 Hz -145 dBc/Hz at 1 kHz -150 dBc/hz at ≥10 kHz
Single Sideband Phase Noise	N/A	3 dB better than IESS 308/309 profile
AM/PM Conversion	2°/dB max. full spec.	
Spurious	-60 dBc max at Plin (excluding 2 MHz around carrier)	
Group Delay (per 80 MHz)	Linear: 0.03 ns / MHz; Parabolic: 0.003 ns/MHz²; Ripple: 1.0 ns pk-pk	
Noise Power Density	<-150 dBW/4 kHz under 20.2 GHz <-65 dBW/4 kHz, passband	
Prime Power	110 – 240 VAC ±10%	
Power Consumption	1200 VA max; 800 VA typical	
MECHANICAL SPECIFICATIONS		
Dimensions	W = 9.50 in; H = 8.1 in; L = 17.00 in (20.35 in with handles)	
Weight	48 lbs. (21.8 kg) typical	
RF Input Connection	2.9 mm female	Type N female
RF Output Connection	WR34 grooved waveguide flange	
M&C Interface **Ethernet** **Serial Interface**	RJ45 jack Multi-pin connector, see outline drawing	
RF Sample Output	2.92mm	
IF Sample Output	SMA female	

Communications & Power Industries

SMP Division
Satcom Products
tel: +1 669-275-2744
email: satcommarketing@cpii.com
web: www.cpii.com/satcom

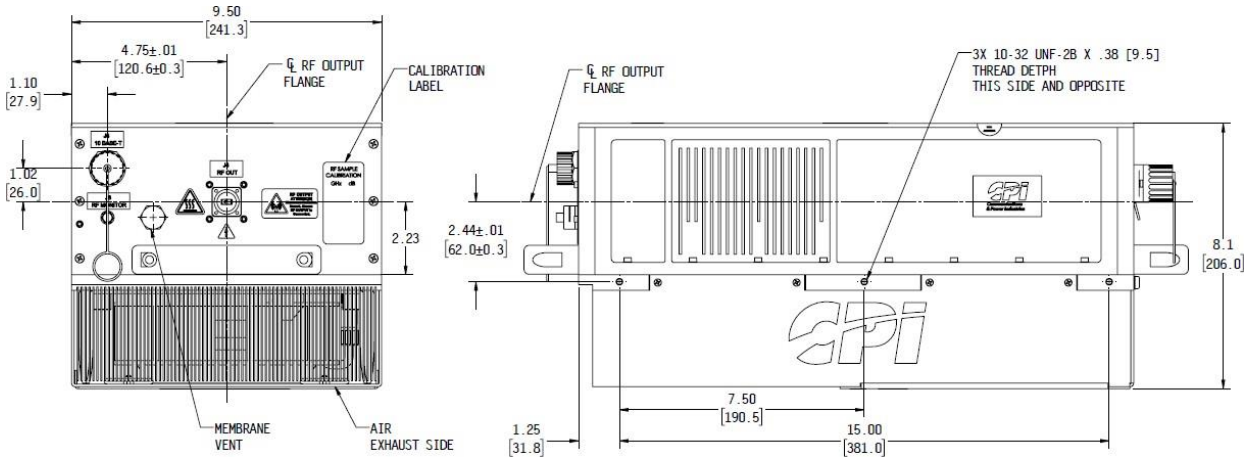
For more detailed information, please refer to the corresponding CPI technical description if one has been published or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

MKT-600, Revision 1 dated Mar 22

GaNLink™ 160 Watt Ka band SSPA/BUC Specification

	SSPA Model SA52KOA	SSPA Model SB52KOA
ENVIRONMENTAL SPECIFICATIONS		
Ambient Temperature **Operating** **Non-Operating**	-40°C to +60 °C -55°C to +85 °C	
Relative Humidity	Up to 100% RH condensing	
Altitude	Operating: up to 10,000 feet (3048 m) above sea level, derated 2°C for every 1000 feet above sea level (305 m); Non-operating: up to 50,000 feet (50,000 m) above sea level	
Cooling	Integral forced air	
Shock and Vibration (operating)	Operating: per MIL-STD-810F: Method 516 and Method 514	
Shock and Vibration (non-operating in shipping container)	MIL-STD-810F516 (Transit Drop); MIL-STD-810F514 (Transportation and Operational Service)	
Weatherproofing	IP66	

Outline drawing for illustrative purposes



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SMP Division
Satcom Products
tel: +1 669-275-2744
email: satcommarketing@cpii.com
web: www.cpii.com/satcom

For more detailed information, please refer to the corresponding CPI technical description if one has been published or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.