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

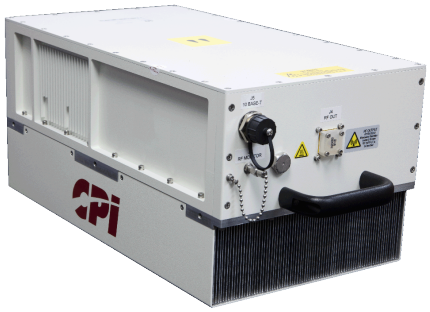
With Multi-Carrier Compatible (MCC) technology, you can be sure that you'll get the most output power out of your HPA, regardless of how many carriers you are using. Without this feature, there would be no telling how far you would have to back off your output power to achieve a linear signal.

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

CPI satcom amplifiers are backed by over 40 years of satellite communications experience, and CPI's global customer support network, including regional service centers located worldwide.



GaNLink 160 W Ka-band GaN SSPA / BUC,
Model SA52KOA / SB52KOA
(Image shown may not reflect all configurations)

FEATURES:

- 80 W 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)
- HTTPS capable

OPTIONS:

- Multi-band BUCs
- Redundant and power-combined systems
- Open BMIP support
- Keyline
- RF output sample port

AVAILABLE ACCESSORIES:

- 3 RU TouchPower Remote Control Panel

Quality Management System - ISO 9001:2015

CE

CPI Communications & Power Industries

www.cpii.com/satcom

Specification	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), -30 dBc at 1.0 SR offset with OQPSK at 5Mb/second, 1/2 FEC (29.0 to 31.0 GHz)	
Gain	60 dB min. at rated power; 64 dB min. at small signal	
Gain Stability Over Temp, Constant Drive Over 24 hours, Constant Temp	 ± 1.5 dB max. ±0.25 dB max.	 ± 2.0 dB max. ±0.25 dB max.
Gain Flatness	±1.75 dB max. over any 1 GHz; ±0.60 dB max. over any 40 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)	1.3:1 max.	1.5:1 max.
Output VSWR (WR-34)	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 standard; 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	42 lbs. (19.1 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	

Communications & Power Industries

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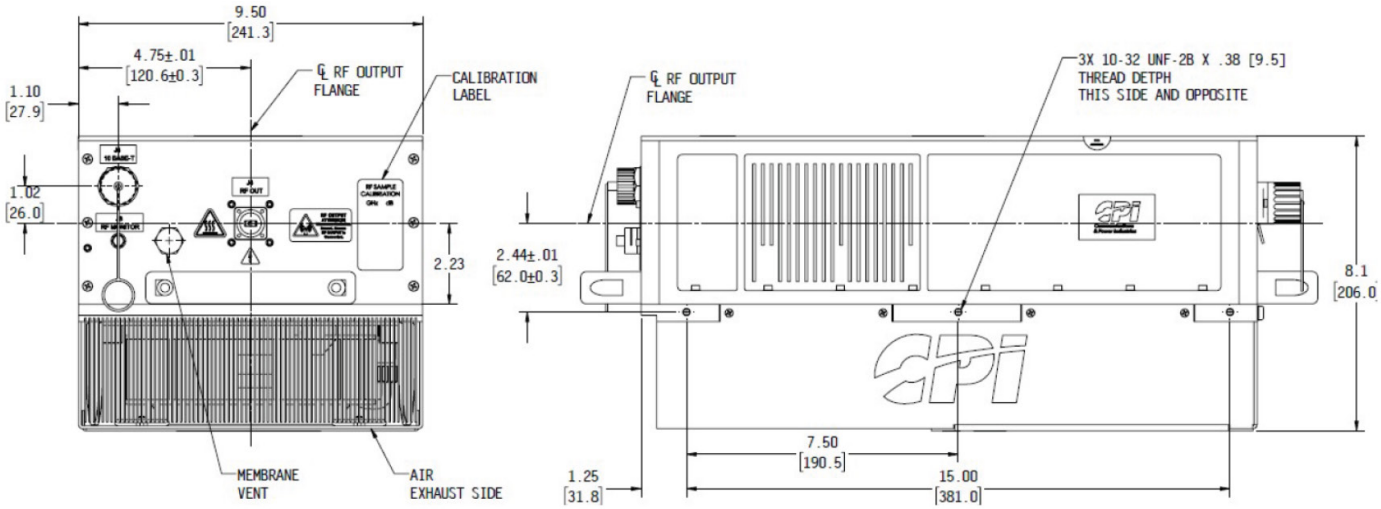
Specification	GaNLink 160 Watt Ka band SSPA/BUC Specification	
	SSPA Model SA52KOA	SSPA Model SB52KOA
ENVIRONMENTAL SPECIFICATIONS		
Ambient Temperature Operating Non-Operating	-40°C to +60 °C -55°C to +85 °C	
Relative Humidity	Up to 100% RH condensing	
Altitude Operating Non-Operating	Up to 10,000 feet (3048 m) above sea level, derated 2°C for every 1000 feet above sea level (305 m) Up to 50,000 feet (50,000 m) above sea level	
Cooling	Integral forced air	
Shock and Vibration Operating Non-Operating	MIL-STD-810F: Method 516 and Method 514 MIL-STD-810F516 (Transit Drop), MIL-STD-810F514 (Transportation and Operational Service)	
Weatherproofing	IP66	
Outline drawing subject to change depending on configuration		



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MKT-600, Revision 4 dated SEP 2025