

Spacepath STS500C 500/1000W C Band Compact GaN BUC



Smaller, lighter and more Powerful this series offers the World's Smallest, Lightest, Powerful and Linear GaN Powered C-Band SSPA / BUC 500W-1000W available on the market today.

This series allows significant high power Solid State Power Amplifier / Block Up Converter size and weight reduction and at the same time substantially improves thermal efficiency, which leads to higher reliability and longer MTBF. That's why SpacePath Communications offers 3 years warranty for this product line!

Using patent pending Z-combining method and advanced GaN technology this new SpacePath Communications 500W-1000W C-Band SSPA/SSPB / BUC has truly outstanding power density - up to 1000W Psat in this super compact 58x38x30cm package weighing only 49KG.

This series features best in class RF characteristics, RF sample port, true RMS power measurements, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces.

500W-1000W C-Band series remarkably compact size and high thermal efficiency results in overall system size and cost reduction making it the ideal candidate for mobile and fixed VSAT applications.

Options

- Internal / Autosense 10MHz Reference
- Automated Level Control (ALC)
- BUC or SSPA
- Antenna Mounting Kit
- External Rackmount Remote M&C Panel

Features

- Extremely High Power Density—Up to 1000W PSAT in 58x38x30cms
- Available in Standard and Full C-Band
- RF Overdrive Protection
- Input and Output True RMS Power Detection

- Superior RF Performance
 - Phase noise 8-10dB better than IESS308/309
 - P1dB up to 60dBm
 - Spurious below -60dBc
 - Wide dynamic range of Gain Control
 - High Linearity
- Configuration via RS-232 serial console, packet protocol RS-485—User friendly HTTP based GUI and SNMP
- Redundant Ready— No External Redundancy Controller Required
- Status LED
- Field Upgradable Software

500W-1000W C Band Block-Up-Converter GaN Specification

Parameter	500W	600W	700W	800W	1000W
RF Performance					
RF Frequency Range-Available in/switched	5.725-6.525GHz / 5.850-6.425GHz / 5.850-6.725GHz				
IF Frequency Range	950-1750MHz / 950-1525MHz / 950-1825MHz				
LO Frequency	4.775GHz / 4.9GHz / 4.9GHz				
Conversion	Single Conversion; non-inverting				
Saturated Power	57dBm typ	58dBm typ	58.5dBm typ	59dBm typ	60dBm typ
Linear Power	54dBm min	55dBm min	55.5dBm min	56dBm min	57dBm min
Conversion Gain	75dB min, 77dB typ				
Gain Flatness	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz				
Gain Stability over temperature	+/-1.5dB over full temperature range				
Gain Stability over input power	3dB typ, 4dB max from 10dB back off to rated power				
Gain Adjust, dB	20dB in 0.1dB steps				
External Reference Frequency	10MHz multiplexed with IF In				
External Reference Required Phase Noise	-130dBc/Hz @ 100Hz -140dBc/Hz @ 1kHz -150dBc/Hz @ 10kHz -155dBc/Hz @ 100kHz				
Up-Converter Phase Noise	-68dBc/Hz @ 100Hz -80dBc/Hz @ 1kHz -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz				
Linearity:	2 tone IMD	-25dBc at 3dB total power back off from rated power			
	Spectral Re-growth	-30dBc for QPSK at 1.5 x symbol rate at 3dB back off from rated power			
Noise Power Density: Transmit Band	-70dBm/Hz				
Output Spurious:	Non-signal related	-60dBc			
	Signal related	-55dBc			
Power					
AC Voltage Range	190-265VAC 50-60Hz Auto-Ranging PFC				
Power Consumption at rated power	4000W				
Power Consumption at 3dB back off	3500W				
Mechanical					
Size	58 x 38 x 30cms				
Weight	49KG				
Cooling	Forced Air				
Operating temperature	-50°C to +55°C				
Relative Humidity	Up to 100% condensing				
Interfaces					
IF Input Connector	N-type female				
RF Output Connector	WR137 grooved				
RF Monitor Port	N-type female				
AC Power In	MS3112E12-3P				
M&C Interface-Serial, Analog, and Ethernet	MS3112E14-19S				
Redundant Interface	MS3112E14-19P				