STSR 2000K Series

Rack Mount GaN Powered BUC

The SpacePath Communications Intelligent Power Block-Up Converter Series is smaller, lighter and more powerful 2kW Ku-Band Rack Mount BUC. This series allows significant size and weight reduction and at the same time substantially improves thermal efficiency, which leads to higher reliability and longer MTBF.

Using patent pending Z-combining method and advanced GaN technology, this series has truly outstanding power density - up to 2kW Psat in 8RU light compact package.

SpacePath Communications 2kW Ku-Band Rack Mount BUC 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. Redundant truly hot swappable power supply gives even higher overall reliability.

SpacePath Communications offers 3 years warranty for this product line!

Options

- Internal 10MHz reference
- 10MHz reference auxiliary output
- Input and Output RF sample ports
- Automatic Level Control (ALC)

Features

- Extremely high power density - up to 2kW PSAT in 19” Rackmount, 8RU only!
- Superior RF performance:
  - Phase noise 5-8dB better than IESS308/309
  - High Linearity
  - PSAT up to 63 dBm
  - Wide dynamic range of Gain control
- Switchable LO - standard and Extended Ku-Band in one unit
- Redundant Hot Swappable Power Supply
- RF Overdrive Protection
- Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP
- User friendly front panel with menu driven display
- Redundant Ready - No external redundancy controller required
- Built-in power metering
- Full VSWR protection

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STSR Series 2kW Ku-Band Rack Mount BUC Specification

Parameter	2KW
RF Performance	
RF Frequency Range-Available in/switched:	12.75-13.25GHz 14-14.5GHz 13.75-14.5GHz
IF Frequency Range	950-1450MH 950-1450MHz 950-1700MHz
LO Frequency	11.8GHz 13.05GHz 12.8GHz
Conversion	Single Conversion; non-inverting
Saturated Power	63dBm/2KW typ
Linear power	60dBm min/1KW
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 Control	20dB min dynamic range
External Reference Frequency	10MHz multiplexed with IF In
External Reference Required Phase Noise	-130dBc/Hz @ 100Hz -140dBc/Hz @ 1kHz -150dBc/Hz @ 10kHz -155dBc/Hz @ 100 kHz
Up-Converter Phase Noise	-68dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz
Linearity: 2 tone IMD Spectral Re-growth	-25dBc at P linear -30dBc for QPSK at 1.5xsymbol rate at Plinear
Noise Power Density: Transmit Band Receive Band	-85dBm/Hz max -148dBm/Hz max
Output Spurious: Non-signal related Signal related	-60dBc -55dBc
Power	
AC Voltage Range	190-265VAC 50-60Hz auto-ranging PFC
Power Consumption at rated power	11.8KW
Power Consumption at 3 dB back off	10.8KW
Mechanical	
Size	6RU SSPA + 2RU PSU
Weight	90KG
Cooling	Forced Air
Operating temperature	0°C to +50°C
Relative Humidity	Up to 99% non-condensing
Interfaces	
IF Input Connector	N-type female rear panel
RF Output Connector	WR75 grooved rear panel
RF Sample	N-type female front panel
AC Power In	NEMA Connector rear panel
M&C Interface-Serial, Analog and Ethernet	DSUB Connectors, RJ45 rear panel
Redundant Interface	HD15 Connector rear panel

Specifications are subject to change without notice