STS2500C
2.5KW C Band
GaN Powered BUC/SSPA

Super High Power Density 2.5KW C Band BUC / SSPA

Smaller, lighter and more Powerful, the KiloBUC® series allows significant high-power BUC / SSPA 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!

The 2.5KW C-Band powered by GaN technology KiloBUC® series are compact, lightweight and extremely powerful. Weighing 100KG at 2.5KW output power, this new C-band product family is the most powerful and feature rich for its size.

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. The remarkably compact size and high thermal efficiency results in overall system size and cost reduction.

Features

- Extremely High Power Density
  - Up to 2.5KW Psat in 61 x 51 x 32 cms
- Superior RF performance
  - Superior Phase Noise: 8 dB better than IESS308/309 recommendation
  - Spurious emission below -60 dBc
  - Wide range Gain Control
  - Highest Linearity at small back-off
- RF Overdrive Protection
- Redundancy ready with no external controller required
- Status LED
- Analogue Interface
- Available in different frequency options
  - Super-extended 5.85-6.725GHz
  - Palapa 6.425-6.725GHz
  - Insat 6.725-7.025GHz
- Extensive M&C capability
  - Serial: RS 232 & RS 485
  - Ethernet: embedded Web browser (HTTP) & SNMPv3 support
- Input and output True RMS power detection
- Field upgradable software

Options

- Internal 10MHz Reference clock
- Automatic Level Control (ALC)
- Antenna Mounting Kit
- 1:1 and 1:2 Redundancy Kit
- Remote Control Panel

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RF Parameters	
Output Frequency Band, GHz	5.85-6.425GHz (other options available)
Input L Band Frequencies, MHz	950-1525MHz
Conversion Gain, dB	75 minimum, 77 typical
Gain Flatness, dB	+/-1 typical +/-1.5 maximum over full band +/-0.4 maximum over any 40MHz
Gain Stability, dB	+/-1.5 maximum over full temperature range
Gain Control, dB	20dB minimum dynamic range
Linearity at Pout=Plin: 2 tone IMD Spectral Regrowth	-25dBc max -30dBc for QPSK at 1 x symbol rate
Input Impedance, Ohm	50Ohm
Input/Output VSWR	1.4:1 / 1.3:1
Noise Power Density, dBm/Hz	-68 in Transmit Band, -140 in Receive Band
Spurious Emission dBc; Non-signal related / Signal related (at Plin)	-60 / -55 max
AM/PM conversion at Plinear, ^{0}/dB	1.0 maximum
Group Delay	Ripple 1 nsec p-p max over any 40MHz band
BUC Parameters	
LO Frequency, MHz	4900MHz
Type of Conversion	Single conversion, non-inverting
External 10MHz	Over IF L Band cable with multiplexing
Phase Noise, dBc/Hz	-70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; -95 @ 100kHz; -115 @ 1MHz
Power	
AC Voltage Range	190-265V AC 50-60Hz PFC
Mechanical & Environmental	
Size	61 x 51 x 32 cms
Weight	100KG (220lbs)
Cooling	Forced Air
Operating Temperature / Relative Humidity	-40°C to +55°C / Up to 100% condensing
Interfaces	
IF Input Connector	N-type Female
RF Output Connector	CPR137 Grooved
RF Sample	N-type Female
AC Power In	3 pin MS style
RS485 – Ethernet – SNMPv3	MS3112E14-19S

SpacePath Part Number	Output Power (W)	Prated (dBm / W)	Plinear (dBm / W)	P Cons at Prated	P Cons at Plin
STS2500C	2500W	64 / 2500	61 / 1250	16000W	12500W

Specifications are subject to change without notice