



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
 - o 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
 - o Spurious emission below -60 dBc
 - o Wide range Gain Control
 - o 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
 - o Super-extended 5.85-6.725GHz
 - o Palapa 6.425-6.725GHz
 - o Insat 6.725-7.025GHz
- Extensive M&C capability
 - o 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



| Output Frequency Band, GHz Input L Band Frequencies, MHz Conversion Gain, dB Gain Flatness, dB F-/-1 typical +/-1.5 maximum over full band +/-0.4 maximum over any 40MHz Gain Stability, dB Gain Control, dB Linearity at Pout=Plin: 2 tone IMD Spectral Regrowth Input Impedance, Ohm Input/Output VSWR Input/Output VSWR Input Impedance, Ohm Input Impedance |
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| Conversion Gain, dB Gain Flatness, dB +/-1 typical +/-1.5 maximum over full band +/-0.4 maximum over any 40MHz Gain Stability, dB Gain Control, dB Linearity at Pout=Plin: 2 tone IMD Spectral Regrowth Input Impedance, Ohm Input/Output VSWR Input/Output VSWR Specific Regrowth Specific Regrowth Specific Regrowth Input/Output VSWR Specific Regrowth South Alt:1/1.3:1 Noise Power Density, dBm/Hz Spurious Emission dBc; Non-signal related / Signal related (at Plin) AM/PM conversion at Plinear, odb BUC Parameters LO Frequency, MHz Type of Conversion Single conversion, non-inverting External 10MHz Phase Noise, dBc/Hz Final related; 15 maximum over full band +/-1 typical +/-1.5 maximum over full band +/-0.4 maximum over full temperature range 20dB minimum over full temperature range 20dB minimum dynamic range 25dBc max -30dBc for QPSK at 1 x symbol rate 100hm 500hm 14:1/1.3:1 -68 in Transmit Band, -140 in Receive Band -60 / -55 max Signal related (at Plin) AM/PM conversion at Plinear, odb Ripple 1 nsec p-p max over any 40MHz band BUC Parameters LO Frequency, MHz 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; |
| Gain Flatness, dB +/-1 typical +/-1.5 maximum over full band +/-0.4 maximum over any 40MHz Gain Stability, dB Gain Control, dB Linearity at Pout=Plin: 2 tone IMD Spectral Regrowth Input Impedance, Ohm Input/Output VSWR Inpu |
| #/-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 -25dBc max Spectral Regrowth -30dBc for QPSK at 1 x symbol rate Input Impedance, Ohm 500hm 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 / 5ignal related (at Plin) 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; |
| 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 -30dBc for QPSK at 1 x symbol rate Input Impedance, Ohm 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) 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 -30dB 10dHz; -80 @ 1kHz; -90 @ 10kHz; |
| Gain Control, dB Linearity at Pout=Plin: 2 tone IMD Spectral Regrowth Input Impedance, Ohm Input/Output VSWR Iniput Impedance, Ohm Input/Output VSWR Noise Power Density, dBm/Hz Signal related (at Plin) AM/PM conversion at Plinear, 0/dB Group Delay BUC Parameters LO Frequency, MHz Type of Conversion External 10MHz Canada Spectral Regrowth Signal related (at Plin) Cover IF L Band cable with multiplexing Phase Noise, dBc/Hz 20dB minimum dynamic range -25dBc max -25dBc max -30dBc for QPSK at 1 x symbol rate -60 / -55 max -140 in Receive Band -60 / -55 max -140 in Receive |
| Gain Control, dB Linearity at Pout=Plin: 2 tone IMD Spectral Regrowth Input Impedance, Ohm Input/Output VSWR Iniput Impedance, Ohm Input/Output VSWR Noise Power Density, dBm/Hz Signal related (at Plin) AM/PM conversion at Plinear, 0/dB Group Delay BUC Parameters LO Frequency, MHz Type of Conversion External 10MHz Canada Spectral Regrowth Signal related (at Plin) Cover IF L Band cable with multiplexing Phase Noise, dBc/Hz 20dB minimum dynamic range -25dBc max -25dBc max -30dBc for QPSK at 1 x symbol rate -60 / -55 max -140 in Receive Band -60 / -55 max -140 in Receive |
| Linearity at Pout=Plin: 2 tone IMD Spectral Regrowth Spectral Regr |
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| Spurious Emission dBc; Non-signal related / Signal related (at Plin) AM/PM conversion at Plinear, °/dB Group Delay BUC Parameters LO Frequency, MHz Type of Conversion External 10MHz Phase Noise, dBc/Hz -60 / -55 max 1.0 maximum Ripple 1 nsec p-p max over any 40MHz band Single 1 nsec p-p max over any 40MHz band Single 2 non-inverting Over IF L Band 2 cable with multiplexing -70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; |
| Signal related (at Plin) AM/PM conversion at Plinear, °/dB Group Delay BUC Parameters LO Frequency, MHz Type of Conversion External 10MHz Phase Noise, dBc/Hz 1.0 maximum 1.0 maximum A 1.0 maximum 1.0 maximum Sipple 1 nsec p-p max over any 40MHz band Bipple 1 nsec p-p max over any 40MHz band Sipple 2 nsec p-p max over any 40MHz band A 900MHz Over IF L Band cable with multiplexing -70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; |
| AM/PM conversion at Plinear, °/dB Group Delay Ripple 1 nsec p-p max over any 40MHz band BUC Parameters LO Frequency, MHz Type of Conversion Single conversion, non-inverting External 10MHz Over IF L Band cable with multiplexing Phase Noise, dBc/Hz 1.0 maximum A900MHz 4900MHz 5ingle conversion, non-inverting Over IF L Band cable with multiplexing -70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; |
| Group Delay BUC Parameters LO Frequency, MHz Type of Conversion External 10MHz Phase Noise, dBc/Hz Ripple 1 nsec p-p max over any 40MHz band 4900MHz Single conversion, non-inverting Over IF L Band cable with multiplexing -70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; |
| BUC Parameters LO Frequency, MHz Type of Conversion External 10MHz Phase Noise, dBc/Hz Single conversion, non-inverting Over IF L Band cable with multiplexing -70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; |
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| Type of Conversion External 10MHz Over IF L Band cable with multiplexing Phase Noise, dBc/Hz Single conversion, non-inverting Over IF L Band cable with multiplexing -70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; |
| External 10MHz Over IF L Band cable with multiplexing Phase Noise, dBc/Hz -70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; |
| Phase Noise, dBc/Hz -70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; |
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| 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 Output Power Prated Plinear P Cons at P Cons at P |
| Part Number (W) (dBm / W) Prated |
| STS2500C 2500W 64/2500 61/1250 16000W 12500W |

Specifications are subject to change without notice