

50 W Ku-band GaN BUC

Compact and Lightweight

Designed and built with VSAT stabilized antenna platforms and other similar satcom-on-the-move customer applications in mind.

Highly Efficient

CPI has incorporated state-of-the-art Gallium Nitride (GaN) HEMT technology into its popular and field-proven Mini-BUC packaging. 30% to 50% more efficient than comparable GaAs-based products.

Comprehensive M&C Functionality

Accessible anytime, anywhere via Internet or mobile phone. Integrate with SNMP to NMS. Enables effective operational management and minimizes network outage. Allows change of IP address without serial cable. Dual LO, serial and LAN interface.

Multi-Band Operation

Select from multiple, factory-set frequency bands within Ku-band.

Internal Self-Resetting Protection

Protects against high temperatures, open/short/overdrive RF output conditions, INT/EXT reference 10 MHz conditions, prime power fluctuations. RF output overdrive protection prevents damage from higher than rated input power.

Global Applications

Meets Electromagnetic Compatibility Directive 2004/108/EC to satisfy worldwide requirements and is CE-marked.

Worldwide Support

Backed by over 35 years of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes more than 20 regional factory service centers.



Model 4950L

50 watt Ku-band GaN BUC
for **satellite uplink applications**

OPTIONS

- Internal or multiplexed 10 MHz reference
- 1:1 Redundant Switching - BUC is configured for 1:1 switching as standard. System hardware sold separately.
- DC option



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Specification	Model 4950L
Frequency	14.00 to 14.50 GHz or 13.75 to 14.50 GHz
L-Band Input	950 to 1450 MHz or 950 to 1700 MHz
Output Power (min.) Saturated (P _{sat} , CW) Linear (Plin1) Linear (Plin2) P1dB equivalent	Note: Plin1 is the RF output power at the specified intermodulation. Plin2 is the RF output power at specified spectral regrowth. 50 watts (47 dBm) 20 watts (43 dBm) 25 watts (44 dBm) 45 watts (46.5 dBm)
Intermodulation	-25 dBc max. with respect to each of two equal carriers 5 MHz apart
Output VSWR	Input: 14 dB return loss, 1.5:1; Output: 19 dB return loss, 1.3:1
Spectral Regrowth	<-30 dBc @ 1.0x symbol rate, 1024 kbps, QPSK 7/8 Vit
Local Oscillator Frequency	13050 MHz (with extended band option user may select 13050 or 12800 MHz)
Gain at 0 dB Attenuation	77 dB ±2.0 dB
Gain Stability	±1.5 dB max. over any 50°C range, freq. set; ±2.0 dB max. over temp, frequency set; ±0.25 dB over 24 hours (fixed temperature and constant drive)
Gain Flatness	±1.50 dB max. over full band; ±0.75 dB max. over 40 MHz
Reference (internal or external)	10 MHz
Reference Freq. Input (external)	Multiplexed on N-type transmit IF input
Reference Freq. Level (external)	-10 to +5 dBm
Ref. Freq. Level Meter	Yes, via M&C
IF Input Level Meter	-40 to -10 dBm, ±2.0 dB
10 MHz Ref. Freq. Stability	≤±5×10 ⁻⁸ , -10°C to +50°C
10 MHz Ref. Freq. Aging	≤±5×10 ⁻⁹ /day
Output Phase Noise	-65 dBc/Hz at 100 Hz, -75 dBc/Hz at 1 kHz, -85 dBc/Hz at 10 kHz, -95 dBc/Hz at 100 kHz, -100 dBc/Hz at 1 MHz
Transmit Attenuator	0 to 20 in 1 dB steps
AM/PM Conversion	2.0°/dB max. at 2 dB output backoff
Output Power Meter Range	15 dB
Output Power Meter	Absolute Accuracy: ±1 dB max. when compensation frequency compensation set Relative Accuracy: ±0.5 dB max. when compensation frequency compensation set
Output Power Meter Modes	CW and burst with adjustable threshold
Spurious/Harmonic Output	-55 dBc max. at linear output power
Group Delay	0.03 ns/MHz linear max, 0.001 ns/MHz ² parabolic max, 1.0 ns pk-pk ripple max. in any 36 MHz band
Prime Power	95 to 265 VAC (36 to 60 VDC optional)
Power Consumption	280 watts typ. at Plin, 400 watts max.
Ambient Temperature	-40°C to +60°C operating, -40°C to +70°C non-operating
Relative Humidity	100% condensing
Weatherproofing	IP67 rating that provides protection from water or dust storms; Sealed to 34 kPa
Altitude (operating)	Up to 5000 m (16,400 ft)
Shock and Vibration	20 g peak, 11 msec, 1/2 sine; 2.1 g _{rms} , 5 to 500 Hz
RF Output Connection	WR-75 PBR120 flange with 4.2 mm through-holes
L-band Input Connection	Type N female
M&C Interface	FSK, RS-232, RS485/422, LAN
M&C Protocols	ASCII, NDSatcom v1, SABus, Codan packet, Telnet, SNMP v1, WEB GUI
Prime Power Connections	AC Connector: LTW PWF-04PMMS-SC7001; AC Mating Connector: C016 20D003 110 12; Optional DC Connector: 97B 3102R 16-11P-622; Optional DC Mating Connector: 97B 3106F 16-11S-622
Dimensions, L x W x H	220 x 151 x 134 mm (8.7" x 5.9" x 5.3") not including connectors, isolator or top screws (contact CPI for outline drawing if needed)
Weight	4.5 kg DC (9.9 lbs), 4.9 kg AC (10.8 lbs)