CPI 250 Watt CW TWT BUC

Ka-Band

CPI Ka-band TWT BUC for Satellite Uplink Applications

Provides up to 215 watts of CW power at the flange in a rugged and compact weatherproof package, digital ready, for wideband single- and multi-carrier satellite service over up to 1.0 GHz within the Ka-band frequency range. Ideal for both transportable and fixed earth station applications.

CPI Model T03KO-B, 250 W Ka-band TWTA, provides up to 215 watts of CW power at the flange

Cost Effective, Efficient, Rugged
Employs a high efficiency helix traveling wave tube, reducing operating costs. Rugged construction allows for operation in extreme environments.

Meets Global Requirements
Meets International Safety Standard EN-60215, Electromagnetic Compatibility 2014/30/EU and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements. CE Marked.

Worldwide Support
Backed by over four decades of satellite communications experience, and CPI's worldwide 24-hour customer support network which includes more than 20 regional factory service centers.

OPTIONS:

- Remote control panel
- Integral switch control and drive
- Redundant or power combined subsystems
- Integral Linearizer
- Ethernet interface
- See MKT-151 for this amplifier without BUC option

Quality Management System - ISO 9001:2015

CE

CPI Communications & Power Industries

www.cpii.com/satcom

Specification	CPI Model T03KO-B, 250 W Ka-band CW TWT BUC
Input Frequency	1000 - 2000 MHz
Output Frequency	Up to 1000 MHz instantaneous bandwidth within the 27.0 to 31.0 GHz frequency band
Output Power (min.)	TWT: 250 W (53.98 dBm) CW Flange: 215 W (53.30 dBm) CW
Intermodulation - with respect to each of two carriers	-24 dBc or better at 7 dB OBO; -23 dBc or better at 4 dB OBO with optional linearizer
Noise Power Ratio	12 dB at 7 dB backoff from rated power; 18 dB at 4 dB backoff from rated power with linearizer
Spectral Regrowth	-30 dB at 7 dB OBO, or at 4 dB OBO with optional linearizer
Gain	70 dB min. at rated output, 75 dB min. at small signal (70 dB min. with linearizer)
RF Level Adjust Range	0 to 25 dB (via PIN diode attenuator) min, 0.1 dB steps
Gain Stability	±0.4 dB/24 hour max,max. at constant drive and temperature, after 30 minute warmup ±3.0 dB max. from -5ºC to +60ºC
Small Signal Gain Slope	±0.04 dB/MHz max.
Small Signal Gain Variation	1.0 dB pk-pk max. across any 40 MHz segment; 4.5 dB pk-pk max. across 1 GHz segment
Input/Output VSWR	1.3:1 max. / 1.3:1 max.
Load VSWR	1.5:1 max. full spec. compliance; 2.0:1 max. continuous; any value for operation without damage;
Phase Noise	3 dB below IESS-308 continuous mask; -36 dBc AC fundamental; -41 dBc sum of all spurs
Spurious	-60 dBc max.
AM/PM Conversion	2.5º/dB max. for a single-carrier up to 6 dB OBO (1.0º/dB max. up to 3 dB OBO with optional linearizer)
Noise Density	<-150 dBW/4 kHz below 21.2 GHz; <-65 dBW/4 kHz max. in passband
Group Delay (over 40 MHz)	0.02 ns/MHz linear max; 0.007 ns/MHz^2 parabolic max; 1.0 ns pk-pk ripple max.
Primary Power	Voltage: Single phase, 100-240 VAC ±10%; Frequency: 47-63 Hz
Power Consumption	800 VAC max.
Power Factor	0.95 min; 0.99 typ.
Ambient Temperature	-40ºC to +50ºC operating in direct sunlight (to +55ºC out of direct sunlight); -54ºC to +71ºC non-operating
Relative Humidity	100% condensing
Altitude	10,000 ft. with standard adiabatic derating of 2ºC/1000 ft. operating; 50,000 ft. non-operating
Shock and Vibration	20 G_{peak}, 11 ms 1/2 sine; 2.1 g_{rms}, 5 to 500 Hz (non-operational)
Cooling	Forced Air with integral blower
Connections	RF Input: WR-28F (WR-34F optional); RF output: WR-34G (WR-28G optional); RF output monitor: 2.9mm SMA Female
M&C Interface	RS422/485 serial interface / Ethernet optional
Dimensions, W x H x D	13.25 x 9.5 x 20.0 inches (337 x 242 x 508 mm)
Weight	58 lbs (26.4 kg) with no options
Heat Dissipation	450 W typ.
Acoustic noise	65 dBA (as measured at 3 ft.) nom.
Note 1	**Customer must select desired frequency range at time of purchase. This decision is TWT dependent and is not field changeable.**

Communications & Power Industries

SMP Division
Satcom Products
tel: +1 669-275-2744
email: satcommarketing@cpii.com
web: www.cpii.com/satcom

For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

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