C-Band

750 W Outdoor TWTA

Built for Outdoor Applications

Provides 750 watts of power in a rugged and compact weatherproof package, digital ready, for wideband, single and multi-carrier satellite service in the 5.85 to 6.65 GHz frequency band (5.580 to 6.725 GHz also available). Ideal for both transportable and fixed earth station applications.

Cost Effective and Efficient

Employs a high efficiency, dual-depressed collector helix traveling wave tube, reducing operating costs.

Reliable

Designed and built to survive in extremely adverse environmental conditions and features increased cooling margin for longer life. CAN-Bus architecture improves reliability and noise immunity. Optional Life**Extender**™/ Life**Predictor** improves TWT life by up to 50%.

Simple to Operate

User-friendly microprocessor-controlled logic with integrated Ethernet computer interface. Digital metering, pin diode attenuation and optional integrated linearizer for improved intermodulation performance. SNMP enabled (v1, v2 or v3).

Easy to Maintain

Modular design and built-in fault diagnostic capability via remote monitor and control.

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 and licensed for import in Brazil, Russia and China.

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.

Model T07CO

750 watt C-band outdoor TWTA for **satellite uplink applications**

FEATURES

- Ethernet Interface
- SNMP interface (v1, v2, or v3)
- Redundant switch controller
- EMC Directive 2014/30/EU
- Harmonic Standard EN-61000-3-2

OPTIONS

- Integral linearizer
- Remote control panel
- Redundant and hybrid power combined sub-systems
- L-band block upconverter (BUC) --- specifications for when BUC is included are not contained in this document. Contact CPI or TD-192 for details.
- Multi-band block upconverter (BUC) --- specifications for when BUC is included are not contained in this document. Contact CPI for details.
- Computer interface: Ethernet interface (standard) or RS422/485 (optional)
- Life**Extender**/Life**Predictor**

Communications & Power Industries
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750 W Outdoor TWTA

Specification	Model T07CO	
Frequency	5.85 to 6.65 GHz	5.850 to 6.725 or 5.850 to 7.100 GHz
Output Power (min.) TWT Saturated Psat, CW)	 750 W (58.75 dBm) min. 650 W (58.13 dBm) min.	 750 W (58.75 dBm) min. 650 W (58.13 dBm) min.
Gain	70 dB min.	
RF Level Adjust Range	30 dB typ. in 0.1 dB steps	
Gain Stability	±0.25 dB/24 hour max, at temp. and constant drive, after 30 min. warmup ±0.75 dB typ. over 10˚C over temp. and constant drive, any freq.	
Small Signal Gain Slope	±0.02 dB/MHz max.	
Small Signal Gain Variation	1.0 dB pk-pk max. across any 80 MHz; 4.0 dB pk-pk max. across the full transmit band	
Input VSWR/Output VSWR	1.3:1 max.	
Load VSWR	2.0:1 max. continuous operation; 1.5:1 full spec compliance; any value operation without damage	
Phase Noise	-10 dB IESS-308/309 phase noise profile; -42 dBc AC fundamentals; -50 dBc sum of spurs (370 Hz to 1 MHz)	
AM/PM Conversion	2.5˚/dB max. for a single-carrier up to 51.1 dBm rated power (up to 54.1 dBm with optional linearizer)	
Harmonic Output	-60 dBc at rated power	
Noise Density, max.	<-150 dBW/4 kHz, 3.4 to 4.2 GHz; <-70 dBW/4 kHz passband; <-105 dBw/4 kHz, 12 to 18 GHz	
Intermodulation with linearizer	-24 dBc with regard to each of two equal carriers at 51.1 dBm output power (-26 dBc max. with regard to each of two equal carriers at 54.1 output power, w/ optional linearizer)	
NPR	19 dB at 4 dB OBO with optional linearizer	
Spectral Regrowth	-30 dBc at 51 dBm (at 54 dBm with optional linearizer)	
Group Delay	In any 80 Mhz band: 0.01 ns/MHz linear max, 0.001 ns/MHz^2 parabolic max, 0.5 ns pk-pk ripple max.	
Primary Power	Voltage: Single phase, 200-240 VAC ±10%; Frequency: 47-63 Hz	
Power Consumption	2.7 kVA max.	
Inrush Current	200%	
Power Factor	0.95 min, 0.99 typ.	
Ambient Temperature	-40˚ to +50˚C operating in direct sunlight; -40˚ to +55˚C operating out of direct sunlight; -54˚ to +71˚C non-operating	
Relative Humidity	100% condensing	
Altitude	10,000 ft. with standard adiabatic derating of 2°C/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-operating	
Cooling	Forced air with integral blower.	
Connections	RF Input: Type N Female; RF Output: CPR137 waveguide flange with threaded 10-32 UNC 2B	
RF Output Monitor	Type N Female	
M&C Interface	RJ45 Ethernet, includes embedded GUI control; RS422/485, RS232 serial interface optional	
Dimensions, W x H x D	12.75 x 11.5 x 22.25 in. (324 x 292 x 566 mm)	
Weight	79 lbs (36 kg) max.	
Heat Dissipation	2000 watts typ.	
Acoustic Noise	68 dBa (as measured at 3 ft.) nom.	

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CE Quality Management System - ISO 9001:2008

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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