DBS-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 17.3 to 18.4 GHz frequency band. 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.

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.**

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 2004/108/EC and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements. CE Marked and licensed for import into China.

Worldwide Support

Backed by over three decades of satellite communications experience, and CPI'sworldwide 24-hour customer support network that includes more than 20 regional factory service centers.

Model T07DO

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

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 for details.
- Computer Interface: Ethernet interface (standard) or RS422/485 (optional)
- Inlet air filter

CPI
Communications & Power Industries
satcom products

811 Hansen Way, PO Box 51625
Palo Alto, CA 94303 USA
tel: +1 (650) 846-3803
fax: +1 (650) 424-1744
e-mail: satcommarketing@cpii.com
website: www.cpii.com/satcom

750 W DBS-Band Outdoor TWTA

Specification	Model T07DO
Output Frequency	17.3 to 17.8 GHz, 17.3 to 18.1 GHz or 17.3 to 18.4 GHz
Output Power (min.) TWT Saturated (P_{sat}, CW)	 750 W (58.75 dBm) min. 630 W (58.00 dBm) min.
Gain	70 dB min, 78 dB max.
RF Level Adjust Range	0 to 30 dB (via PIN diode attenuator) typ, 0.1 dB steps
Gain Stability Over temp, constant drive Over ±10˚C, constant drive	±0.25 dB/24 hour max,max. at constant drive and temperature, after 30 minute warmup ±1.6 dB max. from -40˚C to +55˚C ±0.75 dB typ. at 54 W output power
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 1100 MHz
Input/Output VSWR	1.3:1 max.
Load VSWR	2.0:1 continuous operation; 1.5:1 for full spec. compliance; any value operation without damage
Phase Noise	-10 dB IESS-308/309 phase noise profile; -42 dBc AC fundamentals; -50 dBs sum of spurs (370 Hz to 1 MHz)
AM/PM Conversion	2.5˚/dB max. for a single-carrier at 7 dB below rated power (at 4 dB OBO with optional linearizer)
Harmonic Output	-60 dBc at rated power, second and third harmonics
Noise Density	<-150 dBW/4 kHz, 10.00 to 12.75 GHz; <-65 dBW/4 kHz passband; <-60 dBW/4 kHz passband with linearizer option
Intermodulation - with respect to each of 2 carriers 5 MHz apart	-24 dBc @ 51 dBm output power -26 dBc @ 54 dBm with optional linearizer
Spectral Regrowth	-30 dBc at 1 symbol rate at 4 dB OBO with optional linearizer
Group Delay	0.02 ns/MHz linear max; 0.002 ns/MHz^2 parabolic max; 0.5 ns pk-pk ripple typ.
Primary Power	Voltage: Single phase, 200-240 VAC ±10%; Frequency: 47-63 Hz
Power Consumption	2.3 kVA typ. at 3 dB backoff; 2.7 kVA max.
Power Factor	0.95 min; 0.99 typ.
Inrush Current	200% max.
Ambient Temperature	-20˚C to +55˚C operating, -54˚C 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 at 11 ms (1/2 sine pulse in non-operating condition); 2.1 G rms, 50 to 500 MHz
Cooling	Forced Air with integral blower. Rear air intake and exhaust. Maximum external pressure loss allowable: 0.5” water column
Connections	RF Input: Type SMA Female; RF output: WR62 grooved waveguide flange; RF output monitor: Type SMA 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 inches (324 x 292 x 566 mm)
Weight	79 lbs (35.9 kg) typ.
Heat Dissipation	2000 watts max.
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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