120 W Outdoor TWT Power Amplifier

for Satellite Communications

The T01KO Series

120 Watt CW
Ka-band TWT Low
Power Amplifiers —
Environmentally sealed
compact design for
outdoor operation



Plays in the Rain

Rugged, compact and lightweight amplifier designed for outdoor use.

Efficient and Cost Effective

Mounting at the antenna improves performance through minimized cable losses and saves cost in system design. Employs a high efficiency helix traveling wave tube, reducing operating costs.

Simple to Operate

User-friendly microprocessor-controlled logic with integrated RS422/485 computer interface. Digital metering is standard.

Easy to Maintain

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

Global Applications

Meets International Safety Standard EN-60215, Electromagnetic Compatibility 2004/108/EC and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements.

Worldwide Support

Backed by over three decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes twenty regional factory service centers.



811 Hansen Way P.O. Box 51625, Palo Alto, CA 94303

tel: +1 (650) 846-3803 **fax:** +1 (650) 424-1744

e-mail: satcommarketing@cpii.com www.cpii.com/satcom

OPTIONS:

• 1 RU Remote
Control Panel

• Integrated 1:1
Switch Control

 Redundant and Power Combined Subsystems
 Linearizer
 Block

Upconverter (refer to T01KO B-Series TWTA)

• Ethernet Interface

SPECIFICATIONS, Ka-band Outdoor LPA

SPECIFICATIONS, T01KO Series Electrical

Electrical		Electrical (continued)	
Frequency Output Power	Various frequencies between 27.5 and 31.0 GHz	Group Delay (over any 40 Linear Parabolic	0.01 nsec/MHz max. 0.001 nsec/MHz ² max.
TWT	120 W (50.8 dBm) min.	Ripple	0.5 nsec pk-pk typ.
Flange	100 W (50.0 dBm) min.	Intermodulation	-24 dBc max. or better with two equal carriers at total output flange power of 7 dB below rated single carrier output (at 4 dB below with optional linearizer)
Bandwidth	Up to 3500 MHz		
Gain	70 dB min. at rated power output; 75 dB typ. at small signal (70 dB min. with optional linearizer)		
Gain Stability	±0.25 dB/24hr max. (at constant drive and temp.), ±1.0 dB over temperature range	Primary Power	100-240 VAC ± 10% single phase
		Power Consumption	47-63 Hz 760 VA max.
Small Signal Gain Slope	±0.025 dB/MHz max.	Power Factor	0.95 min.
Small Signal Gain Variation	0.5 dB pk-pk across any 40 MHz segment;	Environmental (Operating)	
.	2.5 dB pk-pk across 1000 MHz	Ambient Temperature	-40°C to +50°C operating,
RF Level Adjust Range	0 to 25 dB min.		in direct sunlight; -40°C to +55°C operating,
Attenuator Step Size	0.1 dB		out of direct sunlight;
Input and Output VSWR	1.3:1 max.		-54°C to +75°C non-operating
Load VSWR	1.5:1 max. continuous operation; any value for operation without damage; 2.0:1 max continuous	Relative Humidity	100% condensing
		Altitude	10,000 ft. with standard adiabatic derating of 2°C/1000 ft., operating
Phase Noise	12 dB below IESS 308 continuous mask		50,000 ft., non-operating
Spurious	-60 dBc max.	Shock	20 g pk, 11 mS, 1/2 sine
AM/PM Conversion	2.5°/dB max. for a single carrier up to 6 dB OBO (1.0°/dB max. up to 3 dB OBO with linearizer option)	Vibration	2.1 grms, 5 to 500 Hz
		Acoustic Noise	65 dBA typ. @ 3 ft. from amplifier
Residual AM Noise Density	-50 dBc below 10 kHz -20 [1.5 + log F(kHz)] dBc, 10 kHz to 500 kHz -85 dBc, above 500 kHz <-150 dBW/4 kHz, below 21.2 GHz, <-115 dBW/12.5 MHz, below 21.2 GHz typ. <-70 dBW/4 kHz max, transmit band (<-80 dBW/4 kHz typ. in transmit band) <-65 dBW/4 kHz max, transmit band with linearizer option	Heat Dissipation	825 W max.
		Mechanical	
		Cooling	Forced air with integral blower
		RF Input Connection	WR-28F (WR-34F optional)
		RF Output Connection	WR-34G (WR-28G optional)
		Remote Interface	RS422/485 and RS232 serial (Ethernet interface optional)
		RF Output Monitor	2.9 mm SMA Female
Noise Power Ratio	-18 dB at 4 dB 0B0 (with linearizer option)	Dimensions (W x H x D)	10.25 x 9.5 x 20.0 in. (261 x 242 x 508 mm)

Electrical (continued)

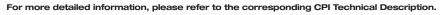
Note 1: Please consult CPI representative to confirm that desired bandwidth is available over desired frequency range.

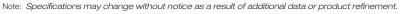
Weight

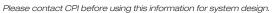
Mounting hardware is provided with each amplifier.















not incl. connectors or handle

55 lbs (25 kg) with no options

