

250 W CW Outdoor TWT BUC

Plays in the Rain

Rugged, compact and lightweight high power BUC designed for outdoor use.

Cost Effective and Efficient

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. Includes integral block upconverter.

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.

Meets Global Requirements

Meets 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 more than 20 regional factory service centers.



Model T03K0-B

250 watt Ka-band outdoor TWT BUC for **satellite uplink applications**

OPTIONS

- Remote control panel
- Integral 1:1 switch control and drive
- Redundant or power combined subsystems
- Integral Linearizer
- For 250 W CW Ka-band TWTA without BUC, refer to document MKT-151



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250 W CW Ka-Band Outdoor TWT BUC

Specification	Model T03KO-B
Output Frequency/Bandwidth	Up to 1000 MHz within the 27.0 to 31.0 GHz frequency range as limited by BUC
Output Power TWT Flange	250 W (54.0 dBm) min. 215 W (53.3 dBm) min.
Gain	70 dB min. at rated output
Small Signal Gain	75 dB min. (70 dB min. with optional linearizer)
RF Level Adjust Range	0 to 25 dB min, in 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 -5°C to +60°C at constant drive
Small Signal Gain Slope	±0.04 dB/MHz max.
Small Signal Gain Variation	0.5 dB pk-pk max. across any 40 MHz segment within the passband
Input/Output VSWR	1.3:1 max.
Load VSWR	1.5:1 max. continuous operation, any value operation without damage; 2.0:1 max. continuous
Phase Noise	3 dB below IESS-308 continuous mask
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 optional linearizer)
Noise Density	<-150 dBW/4 kHz below 21.2 GHz; <-60 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	750 VA typ; 800 VA max.
Power Factor	0.95 min; 0.99 typ.
Ambient Temperature	-40°C to +60°C operating out of direct sunlight (to +55°C in direct sunlight); -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
Connections	RF Input: N Type; RF output: WR-34G (WR-28G optional); RF output monitor: 2.9mm SMA Female
M&C Interface	RS422/485 and RS232 standard (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.