

Outdoor TWT Low Power Amplifier for Satellite Communications

Ku-Band

OUTDOOR LPA

125 Watt
Ku-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 89/336/EEC and Harmonic Standard EN-60555-2 to satisfy worldwide requirements.

Worldwide Support

Backed by over two decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes 9 regional factory Service Centers.

satcom  **division**

CPI satcom division headquarters
811 Hansen Way
P.O. Box 51625, Palo Alto, CA 94303

tel: +1 (650) 846-3700
fax: +1 (650) 424-1744

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

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TWT Low Power Amplifier

SPECIFICATIONS, Ku-band Outdoor LPA

Electrical

Model Number	VZU6992V3
Frequency	13.75 to 14.5 GHz
Output Power	
TWT	125 W (51 dBm)
Flange	107 W (50.3 dBm)
Bandwidth	750 MHz
Gain	
at rated power	40 dB min. (73 dB min. with IPA option)
at small signal	45 dB min. (78 dB min. with IPA option)
Small Signal Gain Slope	0.05 dB/MHz max.
Small Signal Gain Variation	1.0 dB pk-pk (across 80 MHz)
	4.0 dB pk-pk (across 750 MHz)
Gain Stability (at constant drive and temperature)	± 0.25 dB/24 hours max. (after 30 minute warm-up)
VSWR	
Input	1.4:1
Output	1.4:1
Load	1.5:1 max.; no degradation, infinite VSWR without damage
Phase Noise	Single carrier, 7 dB below rated power, exceeds IESS-308/309 by 6 dB
AM/PM Conversion	2° /dB max. for a single carrier
	at 8 dB below rated power
Noise and Spurious (at rated gain)	
	<-130 dBW/4 kHz, 10.9-12.75 GHz
	<-65 dBW/4 kHz, 14.0-18.0 GHz
	<-105 dBW/4 kHz, 18.0-26.0 GHz
	<-125 dBW/4 kHz, 26.0-40.0 GHz
Noise Figure	35 dB max. (10 dB with IPA option)
Intermodulation	-22 dBc or better with two equal carriers at 21 watts
	total output power level (rated output power -7 dB)
Group Delay	(in any 80 MHz band)
Linear	0.01 nsec/MHz max.
Parabolic	0.001 nsec/MHz sq. max.
Ripple	0.5 nsec pk-pk max.
Primary Power	Single phase, 110 or 220 VAC ± 10%, 47-63 Hz
Power Consumption	680 W max.
Power Factor	.95 min.

Environmental (operating)

Ambient Temperature	-40° to +50° C
Relative Humidity	100% condensing
Altitude	10,000 ft with standard adiabatic derating of 2° C/1000 ft
Shock and Vibration	As encountered in normal transportation

Mechanical

Cooling	Forced air with integral blower
RF Connection	WR-75 W/G (UNC 2B 6-32)
RF Output Monitor	Type-N Female
Dimensions (WxHxD)	9 x 9.71 x 16 inches (228.6 x 246.6 x 406.4 mm)
Weight	39 lbs max. (17.7 kg)

Mounting hardware is provided with each amplifier.

OPTIONS:

- *Remote Control Panel*
- *Solid State IPA*
- *Gain Control/SS IPA*
- *Redundant Switch Subsystems*
- *Extended Frequencies*



KEEPING YOU ON THE AIR
not up in the air



satcom division

For more detailed information, please refer to the corresponding CPI Technical Description.

Note: Specifications may change without notice as a result of additional data or product refinement.

Please contact CPI before using this information for system design.