RADITEK

SATCOM
Ku Band TWTA

RoHS COMPLIANT

Ku-Band
Travelling Wave Tube Amplifier
13.75-14.5GHz, WR75,

Order Examples: **RTWTA-13.75-14.5-WR75-700W-m6**
Description: *(TWT Amplifier, 13.75-14.5GHz, WR75, 700 Watts)*

Specifications	
Frequency Range:	13.75 – 14.5 GHz
Output Power at Output Flange:	700 watts min.
Amplifier Gain:	75 dB min at rated power
Small Signal Gain Variation:	4 dB max. (across 750 MHz band)
Small Signal Gain Slope:	+/- 0.03 dB / MHz max.
Gain Stability:	+/- 0.25 dB / 24-hours (after 30 minute warm-up, constant drive and temp)
Gain Adjust Range:	0-35 dB (continuously adjustable)
Intermodulation Products: (from total output power level)	-23 dBc at 7 dB backoff
	-23 dBc at 4 dB backoff with optional linearizer
Spectral Regrowth:	Meets –26 dBc at 440 watts (Single, QPSK Digital Signal)
AM to PM Conversion:	6° / dB at rated power
	2.5° / dB at small signal
Harmonic Output:	-80 dBc max.
Residual AM:	-50 dBc below 10 kHz
	-20 [1.3+LogF in kHz] dBc 10 to 500 kHz
	-85 dBc above 500 kHz
Phase Noise:	Meets Limits Part 1 & 2 of IESS-308
Noise and Spurious Outputs:	-65 dBW / 4 kHz max.
Group Delay: (in any 40 MHz band)	Linear: 0.05 nanoseconds / MHz
	Parabolic: 0.01 nanoseconds / MHz (squared)
	Ripple: 0.50 nanoseconds / MHz (pk-pk)
Input VSWR:	1.5:1
Output VSWR:	2.0:1
Load VSWR:	1.50:1 (spec. compliance)
	2.00:1 (continuous operation)
AC Power Input:	190-255 VAC, single-phase, 47/63 Hz, 2,500 VA

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Ku-Band, Travelling Wave Tube Amplifier

code-m6

13.75-14.5GHz, WR75,

Mechanical	
Dimensions:	19” x 8.75” x 24” deep
Weight:	95 Pounds
RF Connectors:	
Input:	Type-N (rear panel)
Output:	WR-75 (rear panel)
Sample Port:	Type-N (rear panel)
Altitude:	Up to 10,000 ft (de-rate 2ºC /1000 ft above 3,000 ft)
Operating Temperature:	0º to 50º C
Storage Temperature:	-40º to 70º C
Shock and Vibration:	Equal to Mobile Van or Antenna Pedestal
Cooling:	Built-in forced air, rear intake and exhaust
Interface:	RS-422/RS-485/Ethernet TCP/IP
Metering:	Vacuum Fluorescent Display, 4-line, 20-character
Monitored Parameters:	
Forward Power (dBm or Watts)	
Reverse Power (dBm, Watts or % fwd power)	
Cathode Voltage	
Helix Current	
Filament Voltage	
Filament Current	
Collector Voltage	
Cabinet Temperature (ºC or ºF)	
TWT Baseplate Temperature (ºC or ºF)	
User-Settable Warnings:	
Over Forward Power	
Under Forward Power	
Over Reverse Power	
Over Helix Current	
Over Cabinet Temperature	
Over Baseplate Temperature	

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