

PES-250K Ku-band Solid State Power Amplifier



About Precedency Electronics:

Precedency Electronics was founded in 2013 by a group of power amplifier engineers with over 75 years of experience in designing and manufacturing high technology solid state amplifier products for the SatCom market. Precedency Electronics is committed in providing high technology products at affordable prices.

The PES-250K Ku-band high power solid state amplifier, developed by Precedency Electronics, utilizes the latest Gallium Nitride (GaN) power transistor and linear pre-distortion technology. PES-250K is a high efficiency Solid State Power Amplifier (SSPA) which incorporates high power combining and power supply technology and is designed for ease of operation and superior performance. The amplifier is designed to replace Traveling Wave Tube Amplifiers (TWTAs), for fixed or mobile satellite communication system applications. The PES-250K is a light weight, compact design that can be used in very challenging environmental conditions. This product is designed for outdoor use and can be installed on the antenna to reduce waveguide loss. All PES-250K series products have passed very stringent environmental and full-band performance testing.



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PES-250K Specifications

Performance

Frequency Range	14.0-14.5GHz
Saturated Power Output	54dBm (Typical)
P1dB Power Output	53dBm (Typical)
Linear Power Output	52.5dBm
Small Signal Gain	≥70dB @ Saturated Output ≥72dB @ Linear Output
Gain Flatness	Full-band≤±1.5dB
IMD (two equal signals, two equal carriers at 3dB total power backoff from rated output)	≤-25dBc
Regeneration Spectrum @ Pout=51dBm, 3M symbol rate, QPSK	≤-26dBc
Amplitude Modulation/Phase Modulation	≤2deg/dB
Harmonics	≤-60dBc
Noise Figure	≤-80dBW/4kHz Transmit -150dBW/4kHz Receive
Spurious	≤-60dBc
Power Input, Maximum	0dBm
VSWR	1.3:1 Input 1.3:1 Output

Interface

Input Interface Type	N(F)
Input Interface Impedance	50Ω
Input Interface VSWR	≤2.0
Output Interface Type	WR75
Output Interface VSWR	≤1.5
RF Sample Port Type	N(F)
RF Sample Port Coupling	-40dB (Typical)
Interfaces	RS-232/485

Power

Power Supply	110-264VAC 50Hz
Power Consumption	≤1400W

Physical

Dimensions	660x270x180 mm (26x10.62x7.08 inches)
Weight	22kg (48.5lbs)

Environmental Specifications

Operating Temperature Range	-30° C to +55° C (option: -40° C to +60° C)
Non-Operating Temperature Range	-55° C to +85° C
Altitude	3600m (11,800FT)
Humidity	100% Condensing



**PRECEDENCY
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