

MITEQ Inc. introduces a new addition to its family of waveguide LNAs. The AMFW-8F-17702130-120-23P-WP is a very low noise, high dynamic range Ka-band waveguide front end. Isolator protected at both the pressure-sealed WR-42 waveguide input and K(F) connector output, the low-noise amplifier is lightweight with a small profile and footprint. The aluminum alloy housing is sealed against most severe environmental conditions and also fully EMI shielded. LNA includes reverse voltage, over current and over temperature protection in addition to full internal regulation. Total weight is approximately 800 gr., and dimensions are 156mm x 70mm x 51mm.

The AMFW-8F-17702130-120-23P-WP has a typical noise temperature of 100K, with a maximum of 120K, and it is capable of a minimum 23 dBm of P1dB across the full band, 17.7 GHz to 21.3 GHz. Output IP3 is 33 dBm minimum.

Input and output port VSWR is a maximum of 1.25:1 and 1.5:1 respectively. Small-signal gain is 62 dB typical and flatness is 2 dB peak-to-peak maximum. Maximum ripple is 0.2 dB/40 MHz within the whole band. Gain variation with temperature is less than 0.08 dB/°C. Gain is stable to less than 0.4 dB/Month. Total group delay is constant to less than 1 nsec over the full band.

Current draw is nominally 400 mA from a single +12V to 24V supply. Other voltage ranges and alarm options are available. Operating temperature is -40 to +70°C case.



Ka-Band Outdoors Waveguide LNA



- 17.7 to 21.3 GHz
- WR-42 Input
- K(F) Output
- 62 dB Gain
- 23 dBm P1dB Min
- 33 dB IP3 Min
- 110K Typical Noise Temperature
- 10V DC / 400 mA
- +/- 1 dB Flat
- 1.5:1 VSWR Max

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