MITEQ INC. introduces a new addition to its family of waveguide LNAs. AMFW-8F-17702130-120-23P is a very low noise, high dynamic range Ka-Band waveguide front end. Isolator protected at both WR-28 waveguide input and K-Connector output, the low-noise amplifier is very light weight and has an extremely small profile and footprint. Aluminum alloy housing is environmentally sealed and comes with a mounting plate. EMI shield and hermetic sealing option is also available. LNA includes reverse voltage, over current and over temperature protection in addition to full internal regulation.

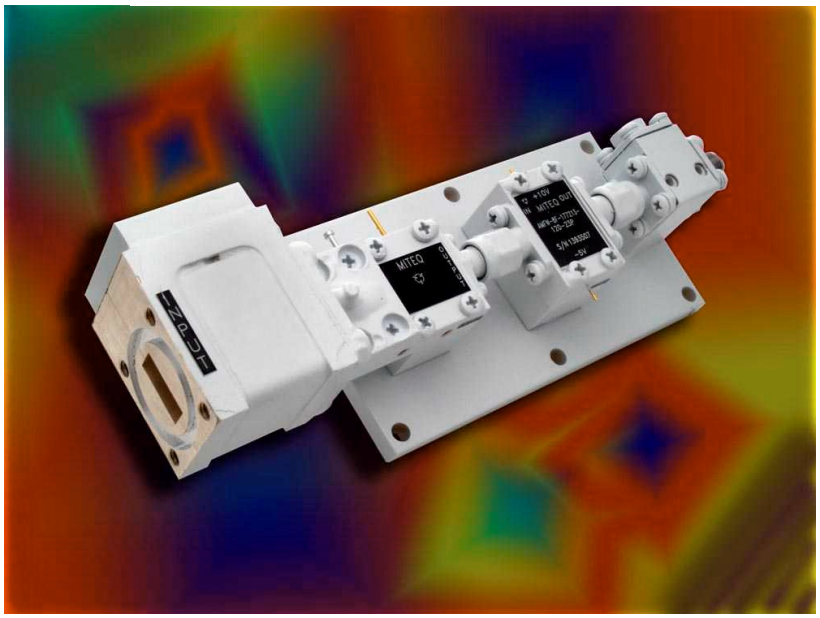
AMFW-8F-17702130-120-23P has a typical noise temperature of 100K, with a maximum of 120K, and it is capable of a minimum of 23 dBm of P1dB across the full band, 17.7 GHz to 21.3 GHz. Output IP3 is a minimum of 33 dBm.

Input and output port VSWR is a maximum of 1.25:1 and 1.5:1 respectively. Small-signal gain is 62 dB 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^0. 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 +10V supply and a –5V supply is also required.

Operating temperature is –50 C^0 to +70 C^0 case.

Ka-Band Waveguide LNA



- 17.7 to 21.3 GHz
- WR-28 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

AMFW-8F-17702130-120-23P