Electronic Warfare relies on Photonis

Photonis is a leading provider of Electronic Warfare solutions to militaries around the world. For over seven decades, Photonis has provided traveling wave tubes, traveling wave tube amplifiers, microwave power modules and sub-systems for electronic warfare devices installed on some of the military’s most deployed platforms. From target detection, realistic training and simulation to decoys and jammers, Photonis ensures the safety of assets and lives on the ground, in the air, and at sea.

Power and Microwave

EVERY THREAT

For over 70 years, Photonis has developed cutting-edge solutions and components for electronic warfare, communications and radar systems. With a diverse range of highly reliable, field-proven standard and custom systems we help you meet every need.
Photonis and its predecessors have been designing and manufacturing Traveling Wave Tubes (TWTs) since their invention in the early 1940’s. Photonis manufactures helix-type tubes that are constructed using the industry standard of metal-ceramic. Our tubes are conduction cooled and feature rare earth periodic permanent magnets for power-free focusing. Photonis TWTs are typically used for electronic countermeasures, radar applications, airborne military platforms, rack mount amplifiers, communications and satcom.

**Microwave Power Modules** for every requirement

Photonis offers Microwave Power Modules (MPMs) to meet the power, bandwidth and spectral purity requirements of many state-of-the-art microwave systems. Microwave Power Modules integrate a solid-state high voltage power supply (HVPS) and a Mini or Micro TWT into a compact, lightweight unit that typically generates over 200 Watts of wide-band microwave amplification for portable, sea, land, or air applications. Other designs can be integrated to support specific linearity requirements. The low noise performance of the solid-state MMIC combined with the high efficiency TWT creates an extremely compact and efficient amplifier. The low SWaP MPM is ideally suited to airborne applications where volume, weight, and prime power are at a premium. Our MPMs are typically used for electronic countermeasures, point to point and SatCom data links, and compact laboratory amplifiers.

**Microwave Power Modules**

- **Capable of continuous RF operation**
- **Can be supplied with a military grade high voltage power supply**
- **Typical uses: final power amplifier in electronic countermeasures, communication, and EMI test equipment**
- **Can be operated in pulse mode**
- **Offered in varying frequency and power levels**
- **Uses include: many radar, radar jamming, and pulsed RF applications**
- **Support applications from approximately 2 to 37 GHz**
- **Provide high power amplification across specific frequency ranges**
- **Ideal for portable and mobile applications where SWaP is considered**

**LINEARIZED MPM PRODUCTS**

- **Same compact, lightweight form factor as the standard MPM with superior linearity to support modern quadrature modulation schemes**
- **Optimized for backed-off RF output power levels**
- **Minimized prime power draw**

**STATE-OF-THE-ART 200W HIGH BAND AND LOW BAND MPM**

- **Combines a high-gain solid state driver with a miniature traveling wave tube, a HVPS and an integrated cooling system into one self-contained unit**
- **Maintains a compact footprint for seamless integration into existing systems**
- **Supports ranges in 2-8 GHz and 6-18 GHz with 200 Watts minimum output across the bandwidth with the mid-band power approaching 300 Watts**

**Traveling Wave Tubes for every application**

Photonis and its predecessors have been designing and manufacturing Traveling Wave Tubes (TWTs) since their invention in the early 1940’s.Photonis manufactures helix-type tubes that are constructed using the industry standard of metal-ceramic. Our tubes are conduction cooled and feature rare earth periodic permanent magnets for power-free focusing. Photonis TWTs are typically used for electronic countermeasures, radar applications, airborne military platforms, rack mount amplifiers, communications and satcom.

**CW TRAVELING WAVE TUBES**

- **Capable of continuous RF operation**
- **Can be supplied with a military grade high voltage power supply**
- **Typical uses: final power amplifier in electronic countermeasures, communication, and EMI test equipment**

**PULSED TRAVELING WAVE TUBES**

- **Can be operated in pulse mode**
- **Offered in varying frequency and power levels**
- **Uses include: many radar, radar jamming, and pulsed RF applications**

**MM WAVE TRAVELING WAVE TUBES**

- **Manufactured in a frequency range of 18 to 46 GHz**
- **Most tubes cover standard wavelength bandwidths**
- **Can be optimized for smaller bandwidths**

**MINIATURE TRAVELING WAVE TUBES**

- **Support applications from approximately 2 to 37 GHz**
- **Provide high power amplification across specific frequency ranges**
- **Ideal for portable and mobile applications where SWaP is considered**

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