

Microwave Power Modules

Applications

- ✓ Electronic Countermeasures
- ✓ Point to Point and SatCom Data Links
- ✓ Ideal for Airborne & UAV Use
- ✓ Compact Laboratory Amplifier
- ✓ Radar



Photonis offers Microwave Power Modules to meet the power, bandwidth and spectral purity requirements of many state of the art microwave systems. The MPM is an efficient, low noise amplifier consisting of a high gain solid-state driver (MMIC) followed by a multi-collector traveling wave tube (TWT) along with their power supplies, all tightly integrated into a common, lightweight package. 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.

Standard MPM Products

Part Number	Frequency Band (GHz)	Rated Power (dBm)	Gain @ Rated Power (dB)	Prime Power Type	Current Draw (Amps)	Size L x W x H (in)	Weight (lbs)	Cooling Method
9107A	2.0 – 6.0	47 to 50	50	28 VDC	15 max	11 x 5 x 2.4	7.8	Self-Contained Forced Air
9107B	2.0 – 6.0	47 to 50	50	28 VDC	15 max	11 x 5 x 2.4	7.8	Conduction
9106A	6.0 – 18.0	47.5 to 50	50	28 VDC	15 max	6 x 7 x 2.5	5.8	Self-Contained Forced Air
9106B	6.0 – 18.0	47.5 to 50	50	28 VDC	15 max	6 x 7 x 2.5	5.8	Conduction
9113	7.9 – 8.4	50	52	270 VDC	1.65	8.1 x 7.5 x 1.7	5.0	Conduction
9116	7.9 – 8.4	49	52	270 VDC	1.5	8.1 x 7.5 x 1.7	5.0	Conduction
9097	9.75 – 9.95 15.15 – 15.35	47 min	52	28 VDC	10	7.8 x 6.5 x 2.6	7.25	Conduction
9101	14.4 – 14.83	47 min	52	28 VDC	10	7.8 x 6.5 x 2.6	6.9	Conduction

Linearized MPM Products

For communications applications, the addition of a pre-distortion linearizer to the MPM RF chain results in a highly linear amplifier. Typical OPBO for linear operation is less than 2 dB with AM/PM less than 2°/dB and gain linearity of ± 0.1 dB. The Linearized MPM provides the same compact, lightweight form factor as the standard MPM with superior linearity to support modern quadrature modulation schemes. Linear MPMs are optimised for backed-off RF output power levels, minimizing prime power draw.

Part Number	Frequency Band (GHz)	Linear Power (dBm)	Gain @ Linear Power (dB)	Prime Power Type	Current Draw (Amps)	Size L x W x H (in)	Weight (lbs)	Cooling Method
9115	7.90 – 8.40	48.0	66	270 VDC	1.5 max	8.0 x 7.7 x 2.7	5.3	Conduction
9109	13.75 – 14.5	48.0	66	270 VDC	1.2	7.5 x 3.7 x 1.3 10 x 4.8 x 1.25	5.4	Conduction
9110	14.40 – 15.35	47.0	52	28 VDC	7.5	7.5 x 7.0 x 2.6	5.9	Conduction
9111	14.40 – 15.35	48.5	50	28 VDC	9.7	7.5 x 7.0 x 2.6	5.9	Conduction

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