

Endless Possibilities!

Microelectronics

The AR Hybrid Power Amplifiers have powers & abilities no single technology can match.

We combined power technologies and microelectronics to create a whole new breed of hybrid power amplifiers. These new ultra wide-band hybrid modules pack an incredible amount of power into small, compact, lightweight bodies. They cover the 6 – 18 GHz range and have powers up to 37 dBm. And they keep on working in the harshest environments.

With all this – and 100% mismatch capabilities, excellent stability, low spurious signals, low noise figure, low intermodulation distortion, and more – these hybrid modules have powers & abilities that no single technology can deliver. Since we produced these in our own state-of-the-art microelectronics lab, we can easily create custom hybrid modules to your specs. So anything is possible.

New Hybrid Modules Combine Multiple Technologies For Exceptional Performance.

Our new line of wideband, hybrid power amplifier modules (HPMs) cover the 6 – 18 GHz frequency range; and are the result of combining Microelectronic technology with the latest developments in thin film substrates. These hybrid modules require a single DC voltage source and are 50 ohm cascadable building blocks with output powers up to 37 dBm.

The six new hybrid power modules provide:

- excellent typical gain and flatness
- excellent noise figure
- low intermodulation distortion
- low spurious signals
- excellent linearity
- 100% load tolerance

These characteristics make the HPMs ideal for many RF applications that require linearity, power and wide bandwidth.

A Combination of Innovative Technologies

The advanced technology used to create these HPMs incorporates plated-thru holes and air bridge technology to ensure optimal RF performance. The active devices are in chip/die form, eutectic-die attached and wire-bonded, providing solid-state reliability and a long operating life. Special materials and process techniques were selected to achieve excellent thermo-dissipation and meet stringent military environmental testing requirements. The modules are hermetically-sealed and their RF input/output connectors are field-replaceable.

AR Will Custom-Design Hybrid Power Modules To Meet Your Requirements

We have the capabilities in-house to create custom HPM design solutions with frequencies from DC to 40 GHz. Bring us your requirements and we'll work with you to create a solution. You can explore infinite possibilities with custom power amplifier modules for each application

- Customizable Hybrid Power Modules
- Broadband with power up to 37 dBm from 6 to 18 GHz.
- Narrowband amplifiers with frequencies up to 40 GHz.
- Hermetically sealed.
- Compact and lightweight.
- Excellent linearity and gain.
- Developed in our in-house, state-of-the-art microelectronics lab.
- Because Size, Weight and Power Matters

The Six New Hybrid Power Modules At-a-Glance

HPM Model	Frequency (GHz)	P1dB (dBm)	Gain (dB)	Input VSWR	Output VSWR	Harmonics P1dB (dBc)	Noise Figure (dB)	IP3 (dBm)	DC Volts	DC Amps	Size (in) WxLxH	Size (cm) WxLxH
24HM6G18-24	6-18	24	24	1.5:1	1.5:1	-20	3	34	10	0.42	1.24x2.1x0.3	3.15x5.33x0.76
29HM6G18-34	6-18	29	34	1.5:1	1.5:1	-20	3	38	10	1.2	1.24x2.72x0.3	3.15x6.91x0.76
32HM6G18-10	6-18	32	10	1.8:1	1.8:1	-20	6	42	10	1.8	1.24x2.1x0.3	3.15x5.33x0.76
32HM6G18-17	6-18	32	17	1.8:1	1.8:1	-20	6	42	10	2	1.24x2.72x0.3	3.15x6.91x0.76
35HM6G18-22	6-18	35	22	2:1	1.5:1	-20	6	44	10	4.4	1.97x3.25x0.3	5x8.26x0.76
37HM6G18-10	6-18	37	10	2:1	2:1	-20	6	46	10	7	4.24x5.8x0.3	10.77x14.73x0.76

* Exclusive of power supply and connectors.