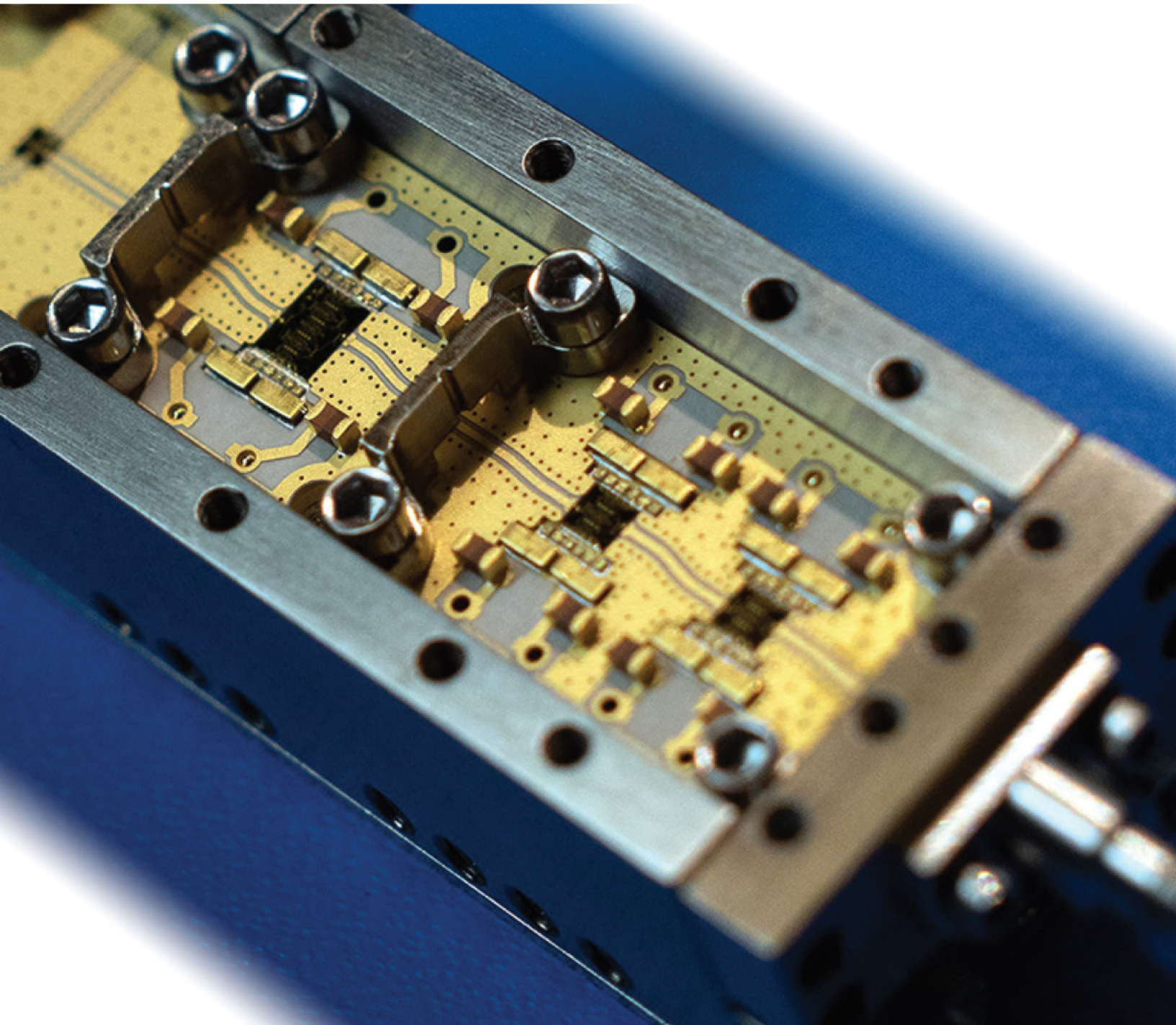




microwave

Modular Design, Prototyping, and
Production from DC to 80 GHz

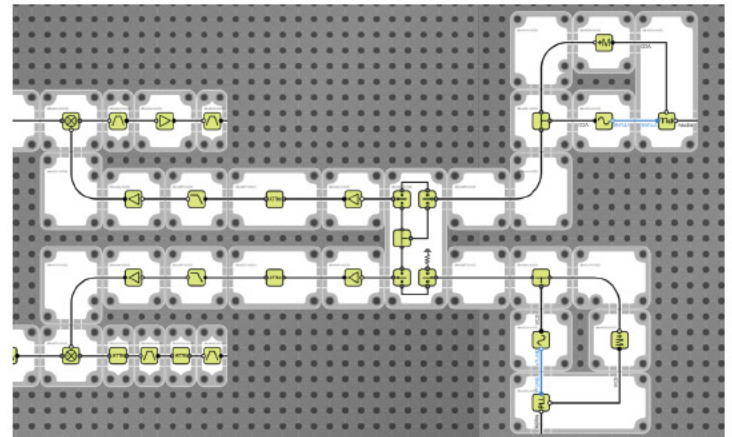
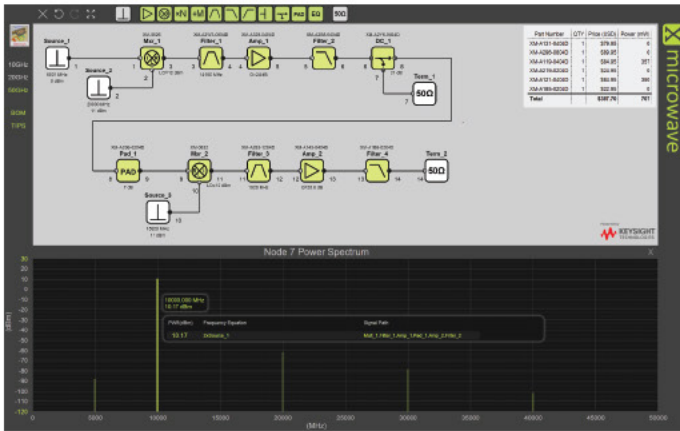


xmicrowave.com

Modular RF and Microwave Design on the Grid

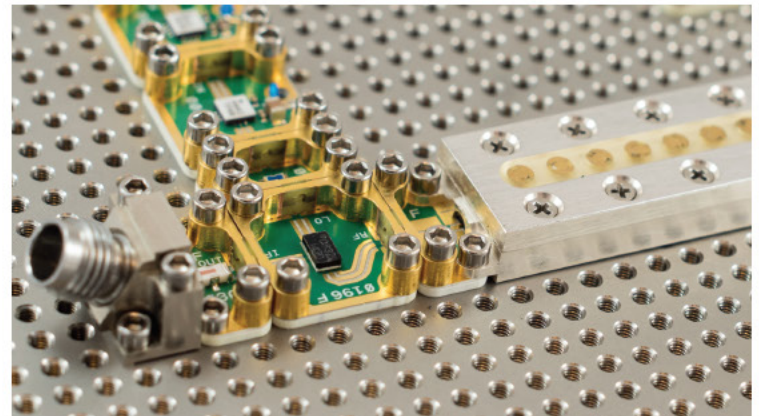
1 Design

Online system simulation, cascade analysis, and mechanical layout tools allow system design and simulation with behavioral, X-Parameter and S-Parameter models. The X-Microwave simulation tool utilizes the Keysight Genesys Spectrasys system simulator engine.



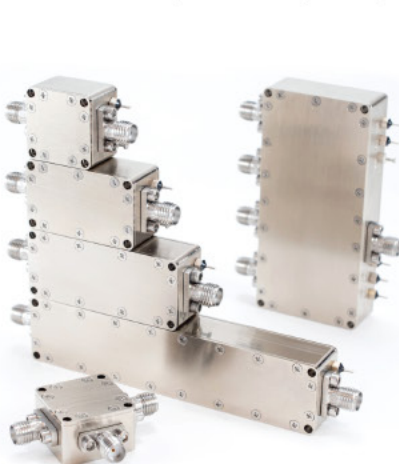
2 Prototyping

Build your design on the prototyping plate. Connect RF X-MWblocks together with high frequency solderless interconnects and power them with sequenced bias and control circuitry from the bottom side of the grid. Instrument your design with the RF probe to test individual parts or your entire cascade at any point in the chain. Wall and lid pieces enable the fabrication of an enclosure for full system verification with cavity effects.

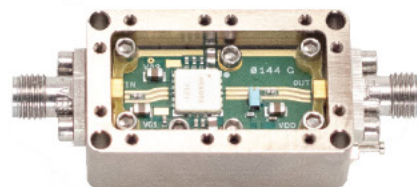


3 Production

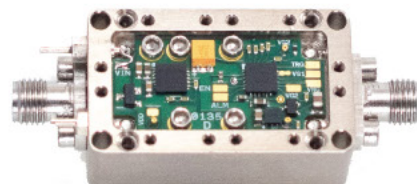
Prototypes built using the X-MWsystem are production ready. X-Microwave blocks and the solderless interconnect are industrial grade and field tested. Your modular designs can be rapidly integrated into a single PCB and are available on-demand at quantity 1 with little or no NRE cost. Standard housings provide a great way to package a single block or a full system. Custom housing and integration services are available when you're ready to deploy your design.



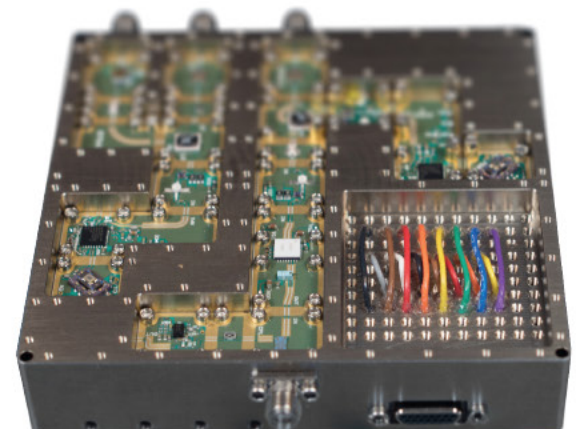
Standard Housings



RF Amplifier & Bias Tee
Top Side - Actual Size



Sequencing & Active Bias Control
Bottom Side - Actual Size



Production IMA with Combined X-Microwave Blocks

Introduction to the X-Microwave System

Featuring a library of over 2,000 RF blocks across all component categories, the X-MWsystem is changing the way RF and Microwave systems are designed. Each X-MWblock is designed with a common launch geometry allowing any two blocks to be cascaded. Complex designs can be built on a 0.135 x 0.135 inch grid with RF blocks on top and matched bias, sequencing, and control boards on the bottom with the transition to H-frame production housings in mind.

Universal RF Probe

Modular Walls and Lids

Cavity Shields

Grid Based Design
0.135" x 0.135"

Solderless Interconnect

CMD173P4
Format: 040
- Actual Size -

Custom X-Microwave Block (CXMB)

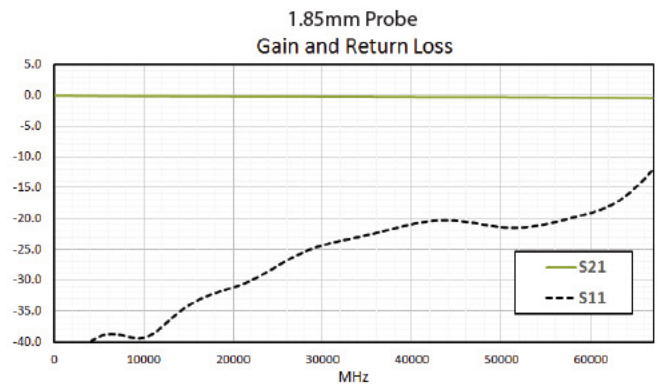
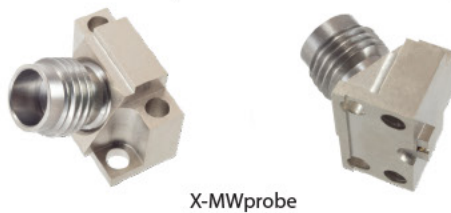
Solderless High Frequency Interconnect (DC - 60 GHz)

Every RF block in the X-MWsystem utilizes the same 50 Ohm coplanar launch allowing a connection between any two blocks. When placed on the grid the launches are separated by a 5 mil air gap. Interconnect can be established using the solderless X-Microwave Ground-Signal-Ground jumper (gsgJumper), soldered or epoxied ribbon, or wire bonding. The gsgJumper is most convenient for prototyping, and rugged enough for production. Once the gsgJumper is placed across two adjacent launches, anchors hold the jumper in place.



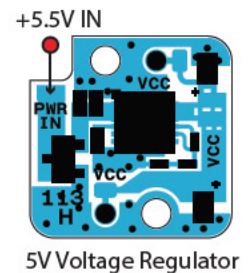
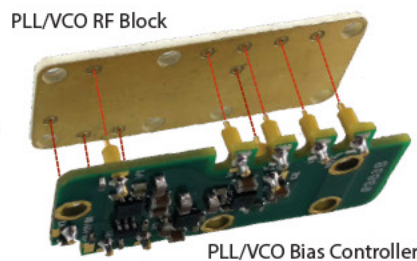
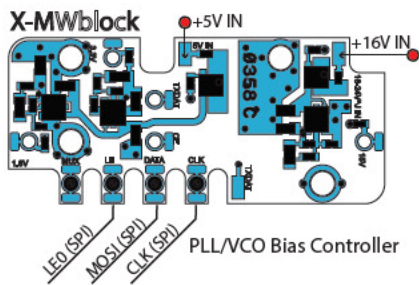
X-MWprobe Universal Probe (DC - 67 GHz)

The probe provides a RF connector interface for the launch of any device in the X-MWsystem enabling rapid prototyping, measurement, and debug of individual X-MWblocks and systems of blocks. Multiple connector styles including 2.92mm and 1.85mm provide low-loss performance from DC to 67 GHz.



Voltage Regulation, Sequencing, Bias and Control

Power and control are provided from the bottom of the prototyping plate from a matched bias and control block. Signals are passed to the RF board through the holes in the grid using a spring-pin interface. Spring-pins allow for a solderless interconnect when prototyping, with provisions for strain relieved, soldered 30ga solid core wire for high vibration environments.



X-Microwave Device Partners

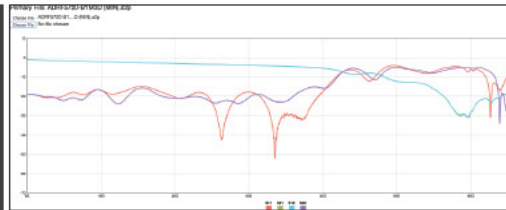


Also featuring devices from API Technologies, Atlanta Micro, Marki Microwave, Microsemi, Qorvo and more.

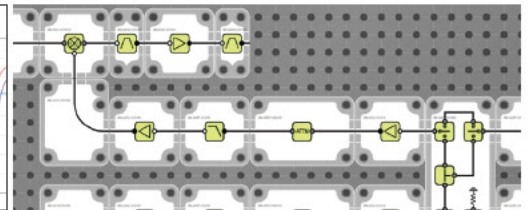
Comprehensive RF and Microwave Offering



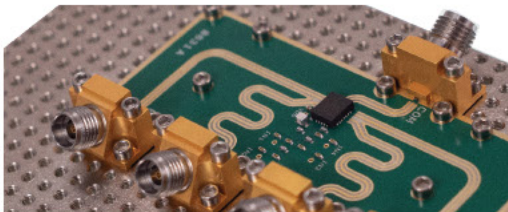
Design and Simulation



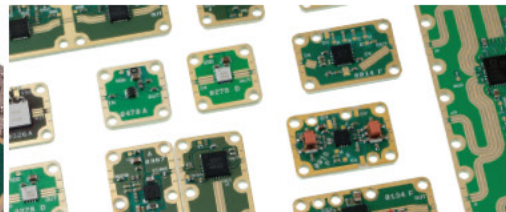
Interactive S-Parameters



Online Layout



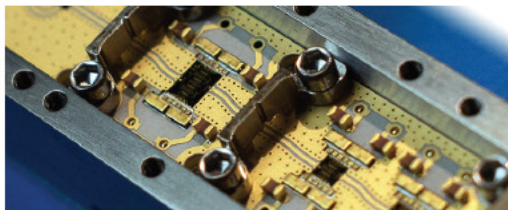
X-Microwave Prototyping System



Thousands of X-Microwave Blocks



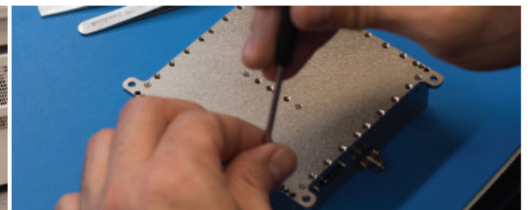
Integrated Microwave Assemblies (IMA)



DIE Integration



RF Test



Custom Enclosure

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