

Amplifiers – Solid State

**Attenuators – Variable/
Programmable**

**Couplers (Quadrature,
180° & Directional)**

Detectors – RF/Microwave

**DLVAs, ERDLVAs
& SDLVAs**

**DTOs, VCOs, PLO, DROs,
& Frequency Synthesizers**

**Filters & Switched
Filter Banks**

**Form, Fit, Functional
Products & Services**

**Frequency Discriminators
& IFMs**

**Integrated MIC/MMIC
Assemblies (IMAs)**

IQ Vector Modulators

Limiters – RF/Microwave

Log Amplifiers

**Millimeter Wave
Components
(Up to 50 GHz)**

Miscellaneous Products

**Multifunction Integrated
Assemblies (MIAs)**

Monopulse Comparators

**Phase Shifters &
Bi-Phase Modulators**

**Power Dividers/Combiners
(Passive & Active)**

Pulse Modulators (SPST)

**Rack & Chassis Mount
Products**

**Receiver Front Ends
& Transceivers**

**SDLVAs, ERDLVAs
& DLVAs**

**Single Side Band
Modulators**

SMT & QFN Products

Switch Matrices

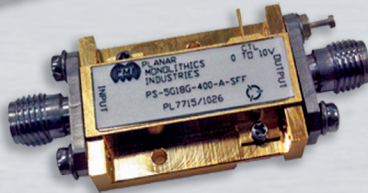
Switched Filter Banks

Switches – Solid State

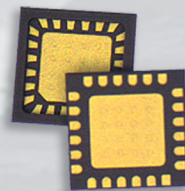
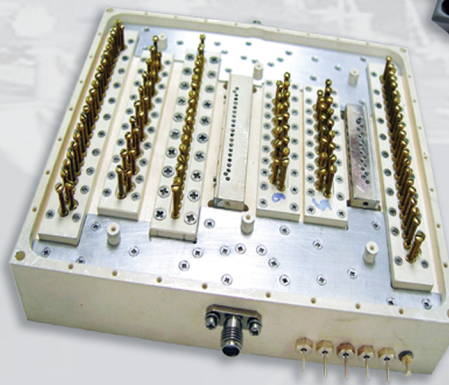
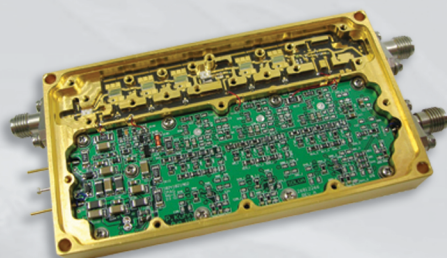
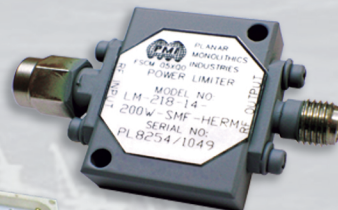
Systems – Fly Eye Radars

Threshold Detectors

USB Products



**PLANAR
MONOLITHICS
INDUSTRIES
INC.**





STANDARD & CUSTOM DESIGNS UP TO 50 GHz

Planar Monolithics Industries, Inc.,
Frederick, MD, USA & El Dorado Hills, CA USA



AMPLIFIERS

PMI offers a full line of RF and Microwave Amplifiers that range from 250 kHz up to 40 GHz. Available in Narrow Band, Octave & Half Octave Band, Broadband, Multi-Octave and Ultra-Broadband models. Our Amplifiers are available in a variety of types: Variable Gain, Waveguide, Gain Correction, Positive Gain Slope, Limiting Amps and High IP Amplifiers for SIGINT applications. PMI manufactures two different models of Portable Test-bench Amplifiers for mobile or laboratory applications which can be designed for use with various power supplies.



ATTENUATORS

PMI offers a complete line of variable solid state attenuators operating from a few Megahertz to 40 GHz in Octave, sub-Octave and Broadband models. Either Voltage Variable or Digitally Variable programmable versions are available. PMI's attenuators offer the industry's best attenuation flatness vs. frequency.



DETECTORS & THRESHOLD DETECTORS

After many years developing sophisticated Detector Logarithmic Video Amplifiers (DLVA's) PMI can now offer a comprehensive selection of Detectors, Directional Detectors and Threshold Detectors. They are available from 2 MHz to 40 GHz. The Threshold Detectors offer both Fixed and Adjustable Threshold Levels, input power levels from -50 to +5 dBm and either ECL or TTL outputs. All models are high speed and small in size.



DLVA's, ERDLVA's & SDLVA's

PMI's Detector Logarithmic Video Amplifiers (DLVA's) are offered covering DC to 40 GHz with Extended Range models offering dynamic ranges over 70 dB. Our standard product provides exceptional temperature stability, log linearity and frequency response. New DLVA and SDLVA models recently have been developed. Please check with us if you need custom DLVA's to meet your requirement or to replace obsolete products.



FILTERS & SWITCH FILTER BANKS

PMI offers the highest quality filters, switch filter banks, filter assemblies, diplexers and multiplexers available for both commercial and military applications. The frequency range is DC to 40 GHz and the filter topology includes Lumped Element, Compline, Interdigital, Narrow Band and Cavity filters. Also, Suspended Substrate filters, Bandpass, Band Reject or "Notch" filters as well as Low-Pass and High-Pass filters. All of PMI's Switch Filter Banks use PMI's proprietary solid state switch designs which offer high speed and improved performance. While there are many standard models, PMI will design and build to your desired specifications.



DESIGNED & MANUFACTURED IN THE USA

Planar Monolithics Industries, Inc.,
Frederick, MD, USA & El Dorado Hills, CA USA



FREQUENCY DISCRIMINATORS & IFM's

PMI offers a full line of RF and Microwave Frequency Discriminator products that range from a few Megahertz up to 40 GHz, many options are available. Please contact PMI to discuss your specific requirements.



I/Q VECTOR MODULATORS & SINGLE SIDEBAND MODULATORS

These Modulators are available with High Speed Modulation, Low Spurious Response, Low Insertion Loss, High Absolute Phase Accuracy and Low Current Consumption as well as standard and custom designed housings. PMI offers unique designs that cover wide bandwidths such as a single unit covering 85 MHz to 18 GHz as an example. Please contact PMI to discuss your specific requirements.



LIMITERS

PMI Limiters cover the frequency range from DC to 40 GHz. They provide low loss, and low leakage levels. Our limiters can be designed to meet your custom electrical and mechanical specifications. Surface Mount and Connectorized units with hermetic sealing are available as well as Commercial and Military Screened and Qualified models.



LOG AMPLIFIERS

PMI IF and RF Log Amplifiers use the same technology that our famous Successive Detection Log Video Amplifiers (SDLVA's) use which make for extremely stable, linear devices operating from a few Megahertz up to 40 GHz.



PHASE SHIFTERS & BI-PHASE MODULATORS

PMI offers the highest quality Phase Shifters and Bi-Phase Modulators for Commercial and Military applications in the frequency range from a few Megahertz up to 40 GHz. Analog or digital control, high phase accuracy, high speed and low insertion loss are available. Phase Shifters can cover from 0 to 360° while Bi-Phase Modulators can switch from either of two phase levels, such as: 0 to 90° or 90° to 180° or 180° to 360°.



USB CONTROLLED & POWERED PRODUCTS

PMI offers the highest quality RF and Microwave Control Products and Amplifiers that are self contained within a small package, operate up to 40 GHz and receive all control commands and DC Power via a built-in USB port. PMI provides a GUI that can be installed on a Windows based PC which allows control of the various switches and attenuators. Additional products can be supplied, including phase shifters, bi-phase modulators, I/Q Modulators, pulse modulators, oscillators, detectors and threshold detectors.



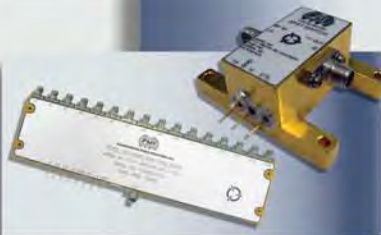
FOR MILITARY AND INDUSTRIAL APPLICATIONS

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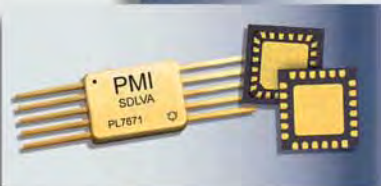
RECEIVER FRONT ENDS & TRANSCEIVERS

PMI designs and manufactures a wide variety of high frequency receiver front ends and transceivers for state-of-the-art applications. PMI is developing and offering these systems that interface with Open VPX architecture and use VIDA67 high frequency interconnects. Standard models are available and PMI can design and develop a device to meet your requirements.



SOLID STATE SWITCHES, SWITCH MATRICES & PULSE MODULATORS

PMI's line of RF and Microwave Solid State Switches cover the frequency range from a few Megahertz up to 50 GHz in many standard models with a number of options available: Ultra-Broadband, Ultra-High Isolation, Very low loss, Low Video Transients, Ultra-high Switching Speed, Very low power consumption, SPST through SP64T, Reflective or Absorptive and available in very small packaging. While all switch products are available connectorized, many are also available in drop-in configuration. PMI Switch Matrix products operate from 20 MHz to 40 GHz and are available in three standard models: 20 MHz to 3 GHz, 2 GHz to 18 GHz and 18 GHz to 40 GHz. Any of the three models can be supplied as a 4 x 4, 8 x 8, 16 x 16 or 32 x 32 non-blocking matrix and custom designs are available.



SMT AND QFN DEVICES

PMI offers Custom Surface Mount and QFN packaging for many types of devices. SDLVAs, Log Amplifiers, Phase Shifters, Attenuators, Switches and well as Low Noise Amplifiers. PMI also offers multifunction options in a single QFN package such as Limiter/LNA or LNA/Detector. Let PMI offer you a custom solution to reduce the size of your PCB layout.



DIGITALLY TUNED OSCILLATORS & FREQUENCY SYNTHESIZERS

PMI offers military, airborne grade, DTO's (Digitally Tuned Oscillators) in the frequency bands of 0.5 to 2 GHz, 0.5 to 2.5 GHz, 2 to 6 GHz, 6 to 18 GHz and 2 to 18 GHz. Other frequency bands are available, please contact us to discuss your desired specifications. PMI DTO's are designed to be Form, Fit and Functional replacements for many legacy platforms.



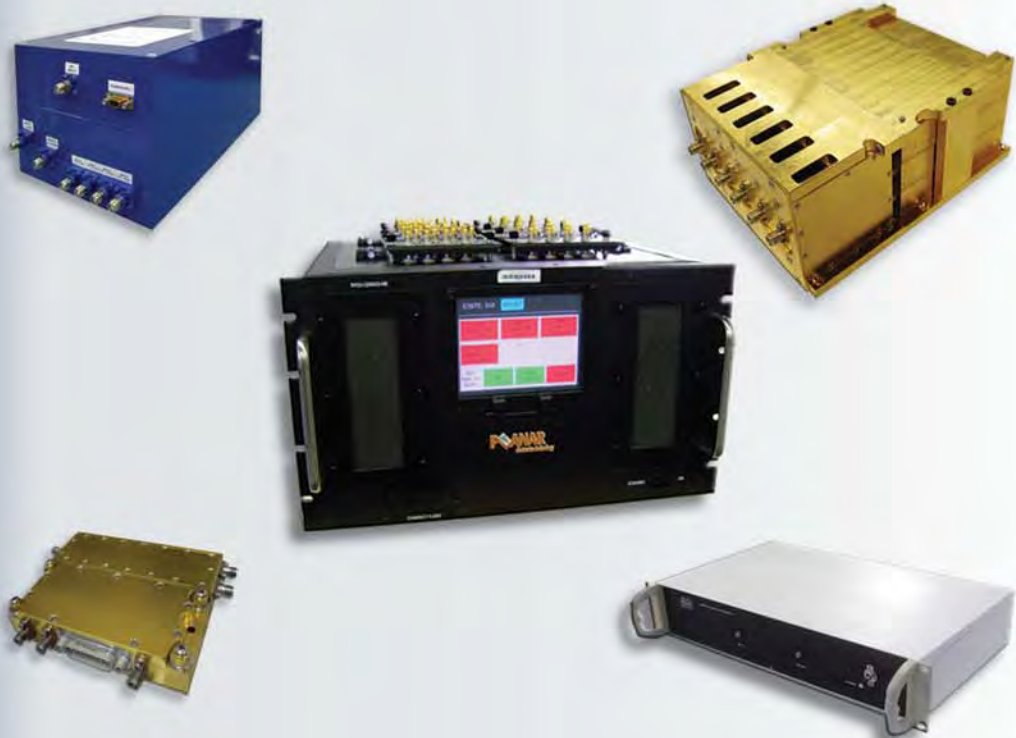
FORM, FIT AND FUNCTION PRODUCTS

Are you faced with the problem of locating obsolete devices to maintain an old system? Or replace products from vendors who are no longer in business? PMI has over 20 years of experience designing products to replace obsolete electronic devices while meeting or exceeding the original product's performance. PMI will use today's technology to build the old, obsolete device while meeting the form, fit and functionality. Full screening services are also available.



DESIGN AND INTEGRATION CAPABILITY

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RACK/CHASSIS MOUNT PRODUCTS

PMI offers various RF and Microwave products that range from 250 kHz up to 40 GHz which are supplied in a ruggedized chassis. Many options are available. Our ruggedized, military grade chassis products are built to meet your exact application needs. Various functions can be offered including: Amplification, Attenuation (Digital Solid-State), Switching, (Ultra High Speed), Power Detection / Fault Detection, Phase Shifting / Phase Modulation, Pulse Modulation, Noise Generation, RF Filtering, RF Limiting, Power Splitting as well as RF Signal Distribution. Send us your Block Diagram for review and PMI will offer you a turn-key solution.

MULTIFUNCTION INTEGRATED MODULES

PMI offers the highest quality multi-function modules and integrated microwave assemblies for commercial and military applications in the frequency range of a few MHz to 40 GHz. They are available with a variety of options including integrated Amplification, Attenuation, Filtering, Switching, Phase Shifting, Power Detection, Modulation, Coupling and Limiting, Digital Control, Hermetic Sealing and Military or Space screening. PMI can custom design models built to your SCD or specifications.



EAST COAST FACILITY:
7311-F GROVE ROAD,
FREDERICK, MD 21704, USA
Tel: 301-662-5019 Fax: 301-662-1731



PLANAR MONOLITHICS INDUSTRIES, INC.

Web: www.pmi-rf.com Email: sales@pmi-rf.com

Planar Monolithics Industries, Inc. (PMI) is a dedicated Engineering and Manufacturing Company that strives for total customer satisfaction by providing rapid response and high quality products. PMI has 25 years of experience in the design and manufacture of technologically superior RF, Microwave, Millimeter Wave components and Sub-Systems for Military and Industrial applications. With ISO 9001 certified facilities in Frederick, MD USA and El Dorado Hills, CA USA, PMI provides solutions and products that will ensure your program's success. You can rely on PMI to be a supportive and resourceful technical and business partner for all of your RF & Microwave requirements from DC to 50 GHz.



WEST COAST FACILITY:
4921 ROBERT J. MATHEWS PKWY., SUITE 1
EL DORADO HILLS, CA 95762 USA
Tel: 916-542-1401 Fax: 916-265-2597

