Here's What's New...

New Product Releases from Planar Monolithics Industries, Inc.
January 29, 2018

1.0 PMI Model No. PE2-15-0R2518R0-5R0-22-12-SFF, 0.25 to 18.0 GHz Low Noise Amplifier

PMI Model No. PE2-15-0R2518R0-5R0-22-12-SFF is a Low Noise Amplifier that operates over the frequency range of 0.25 to 18.0 GHz. This model provides a typical gain of 15 dB and a typical noise figure of 5.0 dB. It provides an OP1dB of 20 dBm minimum and operates on +12 to +15 VDC with a typical current draw of 225 mA. This unit is supplied with removable SMA female connectors in our standard PE2 housing.

- Frequency Range: 0.25 to 18.0 GHz
- Gain: 15 dB Typ. - Measured 14.73 dB Min., 17.06 dB Max.
- Gain Flatness: ±1.5 dB Max. - Measured ±1.16 dB
- Noise Figure: 5.0 dB Typ. - Measured 6.38 dB @ 250 MHz, 2.72 @ 6.0 GHz
- OP1dB: 20 dBm Min., 22 dBm Typ. - Measured 20 dBm
- Max. Input Power: +23 dBm
- VSWR In/Out: 2.0:1 Max. - Measured 1.49:1/1.6:1
- DC Voltage Supply: +12 to +15 V
- DC Current Draw: 225 mA Typ. - Measured 267 mA

PMI Website Link,
http://www.pmi-rf.com/Products/amplifiers/PE2-15-0R2518R0-5R0-22-12-SFF.htm
2.0 PMI Model No. DTA-100M40G-30-CD-1, 0.1 to 40.0 GHz 5-Bit Programmable Attenuator

PMI Model No. DTA-100M40G-30-CD-1 is a 5-Bit programmable 30 dB PIN diode attenuator with a step resolution of 1.0 dB over the frequency range of 100 MHz to 40 GHz. This model operates on a single +15 VDC supply with a maximum current draw of 50 mA. Very high levels of attenuation accuracy of 0.6 dB is achieved. This attenuator provides ultra-fast switching speeds of 300 ns and has an operating input power rating of +20 dBm. This model is supplied with 2.92 mm female RF connectors, and a 15-Pin Micro-D female control connector, in a small, light-weight housing measuring 2.0 x 1.8 x 0.5 inches.

- Frequency Range: 0.1 to 40.0 GHz
- Mean Attenuation Range: 30 dB
- Insertion Loss:
  - 5.0 dB Typ. (Up to 20.0 GHz) - Measured 4.9 dB
  - 8.0 dB Typ. (Up to 40.0 GHz) - Measured 7.1 dB
- VSWR: 2.5:1 Max. - Measured 2.49:1
- Accuracy of Attenuation: ±2.5 dB Typ.
  - Measured:
    - 0 to 10 dB: ±0.59 dB
    - 10 to 20 dB: ±0.09 dB
    - 20 to 30 dB: ±0.20 dB
- Attenuation Flatness:
  - Measured:
    - @ 10 dB: ±0.95 dB
    - @ 20 dB: ±1.47 dB
    - @ 30 dB: ±2.13 dB
- Minimum Attenuation Step: 1.0 dB
- Power Handling Capability: +24 dBm CW Max.
- Input 1 dB Compression: +20 dBm Typ.
- Switching Time
  - On Time: 1.0 µs Max. - Measured 0.25 µs
  - Off Time: 0.5 µs Max.
- Logic Input
  - Logic "0" (Bit Off): 0 to +0.8 V
  - Logic "1" (Bit On): +2.0 to +5.0 V
- Power Supply: +15 V @ 50 mA Max. - Measured 38 mA

PMI Website Link,
http://www.pmi-rf.com/Products/attenuators/DTA-100M40G-30-CD-1.htm

3.0 PMI Model No. HP20G-19D5G-CD-292FF, 20.0 to 40.0 GHz High Pass Filter

PMI Model No. HP20G-19D5G-CD-292FF is a 20.0 to 40.0 GHz High Pass Filter with maximum insertion loss in the passband of 1.5 dB and a maximum VSWR in the passband of 2.0:1 with a rejection of -54 dB @ 14.5 GHz. This model is supplied with 2.92 mm female connectors in a housing measuring 0.61" x 0.56" x 0.50".
Passband: 20.0 to 40.0 GHz
-3dB Cut-Off Frequency: 20 GHz @ 1 dB
Passband Insertion Loss: 1.5 dB - Measured 0.6 dB
Passband VSWR: 2.0:1 - Measured 1.93:1
Rejection: -54 dBc @ 14.5 GHz - Measured 64.53 dBC

PMI Website Link,

4.0 PMI Model No. FD-30M-6M-1515-1, 30 MHz Frequency Discriminator

PMI Model No. FD-30M-6M-1515-1 is a frequency discriminator that operates at a center frequency of 30 MHz.

This model has a peak to peak bandwidth of 10MHz and a linear bandwidth of 6 MHz minimum with a dynamic range of -10 to 0dBm. The sensitivity into a 50 Ohm load is 1000mV/MHz. This unit offers a maximum rise time of 120 ns suited for pulsed input with a 1 µs pulse width.

- Center Frequency: 30 MHz
- Peak to Peak Bandwidth: 10 MHz Min. - Measured >10 MHz
- Linear Bandwidth: 6 MHz Min. - Measured > 6 MHz
- Sensitivity: 1000 mV/MHz ±5% Into 50 Ω
  Measured: 967.93 mV/MHz Min.
  1034.12 mV/MHz Max.
- Linearity: ±5% - Measured ±4.75%
- Input VSWR: 2.0:1 Max. - Measured < 2.0:1
- Input Dynamic Range: -10 to 0 dBm
- Rise Time: 120 ns Max. - Measured <120 ns
- Pulse Width: 1 us Min.
- Pulse Repetition: 1 kHz
- Positive DC Supply: +15 VDC @ 200 mA Max. - Measured 140 mA
- Negative DC Supply: -15 VDC @ 100 mA Max. - Measured 100 mA

PMI Website Link,
http://www.pmi-rf.com/Products/discriminator/FD-30M-6M-1515-1.htm

5.0 PMI Model No. LM-30M3G-C3-1, 0.03 to 3.0 GHz High Power Limiter

PMI Model No. LM-30M3G-C3-1 is a high power limiter that operates from 30 MHz to 3.0 GHz. This limiter can handle input power levels up to 5 Watts CW and provides a maximum leakage of +10dBm. The insertion loss is 1.2 dB maximum with a maximum VSWR of 1.5:1. The recovery time is less than 1 us. This limiter is offered in a coaxial package measuring only 1.314” x 0.375” diameter with a 2.92 mm male input connector, and a 2.92 female output connector.

- Frequency Range: 0.03 to 3.0 GHz
- Insertion Loss: 1.2 dB Max. - Measured 0.52 dB
- Peak Power: 5 Watts CW - Measured 5 Watts CW
Leakage Power: +10 dBm Max. - Measured 10 dBm
Recovery Time: 1 us Max. - Measured 45 ns
VSWR: 1.5:1 Max. - Measured 1.29:1
DC Blocking: Input and Output

PMI Website Link,
http://www.pmi-rf.com/Products/limiters/LM-30M3G-C3-1.htm

6.0 PMI Model No. PS-2G6G-8B-SFF, 2.0 to 6.0 GHz 8-Bit Digital Phase Shifter

PMI Model No. PS-2G6G-8B-SFF is a 8-Bit Digital Phase Shifter that operates over the 2.0 to 6.0 GHz frequency range. This model offers 360° of phase shift having a LSB of 1.4°. The insertion loss is 10.5 dB typical with a typical phase accuracy of ±0.5°. This model is supplied with SMA female RF connectors and a 15 Pin Sub-D male Control & Power connector, in a housing measuring 3.25" x 3.25" x 0.94".

- Frequency Range: 2.0 to 6.0 GHz
- Control: 8-Bit TTL
- Insertion Loss: 10.5 dB Typ. - Measured 8.0 dB
- Phase Shift Range: 360°
- Amplitude Error: ±1 dB Typ. - Measured ±0.1 dB
- Phase Accuracy: ±0.5° Typ. - Measured ±0.35°
- Switching Speed: 500 ns Max. - Measured <250 ns
- DC Voltage:
  - +15 VDC - Measured 189 mA
  - -15 VDC - Measured 21 mA

PMI Website Link

7.0 PMI Model No. APD-2-0518-YR1, 0.5 to 18.0 GHz 2-Way Power Divider

PMI Model No. APD-2-0518-YR1 is a 2-Way Power Divider/Combiner that operates over the frequency range of 0.5 to 18.0 GHz. This model offers low insertion loss of 3.5 dB typical (over 3 dB theoretical) with a VSWR of 1.5:1 typical into a 50 ohm impedance. The typical isolation is 20 dB. This model offers a typical amplitude balance of ±0.45 dB and a typical phase balance of ±5 degrees. This model can handle input power levels of up to 25 watts into a load VSWR of 1.2:1 and up to 7.5 watts into a load VSWR of 2.0:1. This model is supplied with SMA female connectors in a gold plated housing measuring 3.75" x 1.00" x 0.40".

- Frequency Range: 0.5 to 18.0 GHz
- Insertion Loss:
  - 1.8 dB typ. (0.5 to 8.0 GHz) - Measured 2.02 dB
  - 3.5 dB typ. (8.0 to 18.0 GHz) - Measured 3.19 dB
- RF Input Power Handling:
  - 25 Watts CW into a load VSWR of 1.2:1
  - 7.5 Watts CW into a load VSWR of 2.0:1
  - 0.75 Watts CW into a load VSWR of infinite: 1
Amplitude Balance:
- ±0.2 dB typ. (0.5 to 8.0 GHz) - Measured ±0.10 dB
- ±0.45 dB typ. (8.0 to 18.0 GHz) - Measured ±0.44 dB

Phase Balance:
- ±4° typ. (0.5 to 8.0 GHz) - Measured ±0.50°
- ±5° typ. (8.0 to 18.0 GHz) - Measured ±2.75°

Isolation:
- 16.5 dB typ. (0.5 to 8.0 GHz) - Measured 16.4 dB
- 21.0 dB typ. (8.0 to 18.0 GHz) - Measured 17.4 dB

VSWR:
- 1.5:1 typ. (0.5 to 8.0 GHz) - Measured 1.67:1
- 1.6:1 typ. (8.0 to 18.0 GHz) - Measured 1.53:1

PMI Website Link, http://www.pmi-rf.com/Products/power_divider/APD-2-0518-YR1.htm

8.0 PMI Model No. P4T-10G40G-60-T-292FF, 10.0 to 40.0 GHz SP4T Absorptive Switch

PMI Model No. P4T-10G40G-60-T-292FF is a SP4T Solid-State, Absorptive Switch that operates from 10.0 to 40.0 GHz. This model offers a minimum 60 dB of isolation and maximum insertion loss of 6 dB. This model is designed to operate with input power levels up to +23dBm CW. The housing measures 1.25" x 1.25" x 0.50" and is supplied with 2.92 mm female RF connectors.

- Frequency Range: 10.0 to 40.0 GHz
- Insertion Loss: 6 dB max. - Measured 5.62 dB
- Insertion Loss Flatness: ±1.5 dB typical over full band - Measured 1.47 dB
- Isolation: 60 dB min. - Measured 69.58 dB
- VSWR In/Out: 2.0:1 max. - Measured 1.98:1/1.96:1
- Power Handling: >200 mW CW max (+23 dBm CW)
- Switching Speed (10% to 90% RF): 10% to 90%; <100 ns - Measured 30 ns
- DC Voltage and Current:
  - +5 VDC @ 100 mA typ. - Measured 75 mA
  - -5 VDC @ 100 mA typ. - Measured 43 mA
- Control Signal: 2-Bit Decoded TTL Logic

PMI Website Link, http://www.pmi-rf.com/Products/Switches/P4T-10G40G-60-T-292FF.htm

9.0 PMI Model No. SDLVA-6G18G-CD-1, 6.0 to 18.0 GHz Successive Detection Log Video Amplifier

PMI Model No. SDLVA-6G18G-CD-1 is a Successive Detection Log Video Amplifier (SDLVA) that offers 75 dB Dynamic Range over the frequency range of 6.0 to 18.0 GHz. This model offers an ultra-fast rise time of 10 ns maximum and a recovery time of less than 60 ns maximum. The unit is temperature compensated such that log linearity over temperature remains less than ±2.5 dB over the full operating temperature range of -40 ºC to +85 ºC. This model is supplied with SMA female connectors, in a
compact housing measuring only 3.2" x 1.8" x 0.4".
[Optional frequency ranges covering 100 MHz to 26.5 GHz are available.]

- Frequency Range: 6.0 to 18.0 GHz (100 MHz to 26.5 GHz available)
- Flatness: ±2.0 dB Max. - Measured ±1.9 dB
- TSS: -70 dBm Min. - Measured -71 dBm
- VSWR: 2.0:1 Max. - Measured 1.9:1
- Psat: +7 dBm
- Power Input: +17 dBm CW Max.
- RF Out: Available with or without
- Log Slope:
  - 25 mV/dB Nominal (50 Ω Load)
  - 48 mV/dB Nominal (No Load) - Measured 49.9 mV/dB max., 46.2 mV/dB min.
- Log Linearity: ±2.5 dB max. (-40ºC to +85 ºC) - Measured ±1.71 dB
- Pulse Range: 30 ns to CW
- Rise Time: 10 ns max., 5 ns typ. - Measured 5 ns
- Recovery Time: 60 ns max., 40 ns typ. - Measured 45 ns
- Power Supply:
  - +15 V or +12 V @ 350 mA nominal
    Measured +15 V @ 300 mA
  - -15 V or -12 V @ 180 mA nominal
    Measured -15 V @ 100 mA

PIM Website Link,
http://www.pmi-rf.com/Products/SDLVA/SDLVA-6G18G-CD-1.htm

10.0 PIMI Model No. TD-2G18G-RL-CD-SFF, 2.0 to 18.0 GHz Threshold Detector

PIMI Model No. TD-2G18G-RL-CD-SFF is a high speed threshold detector designed to operate over the 2.0 to 18.0 GHz frequency range, with an adjustable threshold level of -30 to -10 dBm and a VSWR of 3.0:1 typ. This unit is supplied with field removable SMA female connectors in a small package measuring 1.1" x 0.6" X 0.19".

- Frequency Range: 2.0 to 18.0 GHz
- VSWR: 3.0:1 Typ. - Measured 2.09:1
- Dynamic Range: -30 dBm to +10 dBm - Measured -31.5 dBm to -7 dBm
- Threshold Variation (With Frequency): ±1.5 dB Max. - Measured ±0.95 dB
- Minimum Pulse Width: 50 ns Typ.
- Output:
  - TTL "0" Input Power > Threshold Setting
  - TTL "1" Otherwise
- Temperature Stability: 1.0 dB Typ., 3 dB Above Threshold Setting
- Threshold Setting Control: External Voltage, 0 to +5 V - Measured 2.5 V
- Threshold Level Setting Range: -30 to -10 dBm
- Input Power: 100 mW CW Max.
- Power Supply: ±5 V @ 100 mA Typ.
  Measured:
  - +5 V @ 60 mA
  - -5 V @ 27 mA
DC to 50 GHz Components, Modules, and Sub-Systems

PMI offers just about any RF/Microwave component, module, or sub-system for both industrial and military based requirements. Please click on the product types below to be directed to our web site catalog. Components and modules can be modified to meet your exact requirement.

(Click on links below to be directed to the web listings)
We truly value your interest in our company and our products. We appreciate your feedback. Please feel free to contact us with any requirements or questions that you may have.

Sincerely,

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