Here's What's New...

New Product Releases from Planar Monolithics Industries, Inc.
February 27, 2018

1.0 PMI Model No. PEC3-40-2G6G-15LM-SFF-HS, 1.85 to 6.25 GHz Limiting Amplifier

PMI Model No. PEC3-40-2G6G-15LM-SFF-HS is a 1.85 to 6.25 GHz limiting amplifier with a minimum gain of 35 dB, while maintaining a maximum gain flatness of ±2.5 dB over the operating frequency. This model operates with an input power range of -15 to +17 dBm and maintains a limited output of +15 dBm minimum. This model is supplied with SMA female connectors in a hermetically sealed housing measuring 1.91" x 0.78" x 0.36". [Other frequency ranges and limited output levels available.]

- Frequency Range: 1.85 to 6.25 GHz
- Noise Figure:
  - 5.5 dB Max. @ +25°C - Measured 4.09 dB
  - 6.0 dB Max. @ +85°C - Measured 4.40 dB
- Gain: 35 dB Min. - Measured 41.47 dB Min.
- Gain Flatness over Operating Temperature: ±4.0 dB Max. (-55°C to +85°C) - Measured ±0.2 dB
- Gain Flatness over Operating Temperature:
  - ±2.5 dB Max. - Full Frequency Range - Measured ±0.35 dB
  - ±2.0 dB Max. - Over any 500 MHz - Measured ±0.1 dB
- VSWR: 2.0:1 Max. - Measured 1.58:1
Saturated Output Power: +15 dBm Min. - Measured 17.17 dBm
Input Power Range: -15 to +17 dBm
  - ±1.5 dB Max. - At any Operating Temperature - Measured ±0.75 dB
  - ±0.5 dB Max. - Over any 500 MHz - Measured ±0.25 dB
Saturated Power Variation over Temperature: ±1.25 dB Max. - At any Single Frequency - Measured ±0.815 dB
Harmonic Content: -15 dBc Min. - Measured -16.53 dBc
Reverse Isolation: 50 dB Min. - Measured 64.37 dB

Pulse Response:
  - Overshoot: 0.2 dB Max. - Measured <0.2 dB
  - Settling Time: 10 ns Max.
  - Recovery Time: 50 ns Max.

Maximum Input Power (No Damage):
  - +20 dBm CW
  - +30 dBm, 0.005 Duty Cycle, 1 usec

DC Voltage Supply: +10.8 to +13.2 VDC
DC Current Draw: 350 mA Max.

PMI Website Link,

2.0 PMI Model No. DTA-2G18G-60-CD-2, 2.0 to 18.0 GHz 10-Bit Programmable Attenuator

PMI Model No. DTA-2G18G-60-CD-2 is a 10-Bit programmable 60 dB PIN diode attenuator with a step resolution as low as 0.06 dB over the frequency range of 2.0 GHz to 18.0 GHz. This model is supplied with SMA female RF connectors and a 15 Pin D-Sub female DC connector in a slim line housing measuring 2.00" x 1.80" x 0.50".

- Frequency Range: 2.0 to 18.0 GHz
- Mean Attenuation Range: 60 dB
- LSB: 0.06 dB
- Insertion Loss: 4.5 dB Typ. - Measured 4.38 dB
- VSWR: 2.0:1 Max. - Measured 1.59:1
- Survival Power Rating: 2 W Average from -65°C to +25°C
- Operating Input Power: +15 dBm Typ.
- Attenuation Flatness:
  - ±1.0 dB @ 20 dB Attenuation - Measured ±0.43 dB
  - ±1.25 dB @ 40 dB Attenuation - Measured ±0.86 dB
  - ±3.0 dB @ 60 dB Attenuation - Measured ±2.08 dB
- Attenuation Accuracy:
  - ±1.0 dB @ 0 dB to 20 dB Attenuation - Measured ±0.21 dB
  - ±1.5 dB @ 20 dB to 40 dB Attenuation - Measured ±0.09 dB
  - ±2.0 dB @ 40 dB to 60 dB Attenuation - Measured ±0.33 dB
- Switching Speed
  - On Time: 1 usec Max. - Measured 0.7 usec
  - Off Time: 0.5 usec Max.
- Digital Control: 10-Bit Binary TTL
- DC Voltage: +15 @ 150 mA Max. - Measured +12 VDC @ 136 mA

PMI Website Link,
3.0 PMI Model No. QC-5D3G6G, 5.3 to 6.0 GHz Quadrature Coupler

PMI Model No. QC-5D3G6G is a quadrature coupler that operates over the frequency range of 5.3 to 6.0 GHz. This model provides low loss of 1 dB and an isolation of 18 dB minimum. The VSWR is 1.4:1 maximum into a 50 ohm impedance. The amplitude balance is ±0.7 dB maximum and the phase balance is ±5° maximum. This model is supplied with SMA male connectors in a housing measuring 1.25" x 0.75" x 0.33".

- Frequency Range: 5.3 to 6.0 GHz
- Insertion Loss: 1.0 dB Max. - Measured 1.0 dB
- Amplitude Balance: ±0.7 dB Max. - Measured ±0.4°
- Phase Balance: ±5.0° Max. - Measured ±2.4°
- Isolation: 18 dB Min. - Measured 19.8 dB
- VSWR: 1.4:1 Max. - Measured 1.28:1
- Impedance: 50 Ohms

PMI Website Link,

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

PMI Model No: FD-30M-6M-1515 is a Frequency Discriminator that operates at a Center Frequency of 30 MHz. It has a peak to peak bandwidth of 10 MHz and a linear bandwidth of 6 MHz minimum with a Dynamic Range of -10 to -0 dBm. The sensitivity into 50 Ohms is 1000 mV/MHz. This device offers a maximum rise time of 120 ns and the size is 4.63" X 1.50" X 0.47".

- 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 Ohms - Measured 1000 mV/MHz
- Linearity: ±5% - Measured <±5%
- Input VSWR: 2.0:1 Max. - Measured 1.09:1
- Input Dynamic Range: -10 to 0 dBm -Measured -10 to 0 dBm
- Rise Time: 120 ns Max. - Measured <120 ns
- Positive DC Supply: +15 VDC @ 200 mA Max. -Measured 79 mA
- Negative DC Supply: -15 VDC @ 100 mA Max. - Measured 51 mA

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

5.0 PMI Model No. HP8G-7D8G-CD-SFF, 8.0 to 22.0 GHz High Pass Filter
PMI Model No. HP8G-7D8G-CD-SFF is a High Pass Filter with a passband of 8.0 to 22.0 GHz and a -3 dB Cut-Off Frequency of 7.8 GHz. It has a maximum passband insertion loss of 1.5 dB and maximum passband VSWR of 2.0:1. This model is supplied with SMA female connectors in a housing measuring 1.15" x 0.70" x 0.50".

- Passband: 8.0 to 22.0 GHz
- -3 dB Cut-Off Frequency: 7.8 GHz
- VSWR in the Pass Band: 2.0:1 Max. - Measured 1.9:1
- Insertion Loss in the Pass Band: 1.5 dB Max. - Measured 1.36 dB
- Rejection:
  - -35 dB Typ. @ 7500 MHz - Measured 35 dB @ 7500 MHz
  - -50 dB Typ. @ 5600 MHz - Measured 89 dB @ 5600 MHz

PMI Website Link,
http://www.pmi-rf.com/Products/filters/HP8G-7D8G-CD-SFF.htm

6.0 PMI Model No. LM-10M2D5G-100CW-1KWP-SFF, 0.01 to 2.5 GHz Limiter

PMI Model No. LM-10M2D5G-100CW-1KWP-SFF is a RF limiter that operates in the 0.01 to 2.5 GHz frequency range. This limiter can handle 100 W CW and 1 kW peak (1% duty cycle, 1 µs maximum pulse width) input power and provides a maximum leakage of +13 dBm CW input. This module has a low insertion loss of 0.5 dB and a recovery time of 2 µs typical. This model is supplied with SMA female connectors in a gold plated housing measuring 1.86" x 0.65" x 0.38".

- Frequency Range: 0.01 to 2.5 GHz
- Insertion Loss: 0.5 dB Typ. - Measured 1.09 dB
- Input/Output VSWR: 1.3:1 Max. (@ -10 dBm Input) - Measured 1.28:1/1.22:1
- Impedance: 50 Ohms
- Input Power:
  - Input Power: 100 W CW Max.
  - 1 kW Peak (1% Duty Cycle)
  - 1 µs Max pulse width
- Maximum Flat Leakage: 13 dBm Max. @ 10 W CW
- P1dB: 0 dBm Min.
- Recovery Time: 2 µs Typ.

PMI Website Link,
http://www.pmi-rf.com/Products/limiters/LM-10M2D5G-100CW-1KWP-SFF.htm

7.0 PMI Model No. PDPS-3F-6-AL, 3.0 GHz 6-Bit Phase Shifter
PMI Model No. PDPS-3F-6 Option AL is a Six Bit Phase Shifter with a speed of 300 ns maximum, (100 ns typical), designed to operate at a frequency of 3.0 GHz with a VSWR of 2.0:1. This unit has a typical insertion loss of 9.0 dB maximum and a phase accuracy of ±6° maximum, 3° typical at 3.0 GHz. This model is supplied with SMA female connectors in a housing measuring 3.00" x 2.70" x 0.53".

- Frequency Range: 3.0 GHz (Bandwidth 500 MHz)
- Insertion Loss: 9.0 dB Typ., 10 dB Max.
  - Measured All TTL "1"
    - 3.21 dB @ 2.75 GHz
    - 3.20 dB @ 3.0 GHz
    - 3.20 dB @ 3.25 GHz
  - Measured All TTL "0"
    - 3.79 dB @ 2.75 GHz
    - 3.84 dB @ 3.0 GHz
    - 3.91 dB @ 3.25 GHz
- VSWR Input/Output: 2.0:1 - Measured 1.30:1/1.44:1
- Phase States: 5.6°, 11.2°, 22.4°, 45°, 90°, 180°
- Phase Accuracy @ 3.0 GHz: ±6° Max., 3° Typ. @ 3.0 GHz
  - Measured 5.6°
    - 6.9° @ 2.75 GHz
    - 6.3° @ 3.0 GHz
    - 6.4° @ 3.25 GHz
  - Measured 11.2°
    - 11.1° @ 2.75 GHz
    - 10.7° @ 3.0 GHz
    - 10.5° @ 3.25 GHz
  - Measured 22.5°
    - 22.3° @ 2.75 GHz
    - 22.9° @ 3.0 GHz
    - 23.7° @ 3.25 GHz
  - Measured 45.0°
    - 45.1° @ 2.75 GHz
    - 45.0° @ 3.0 GHz
    - 45.5° @ 3.25 GHz
  - Measured 90.0°
    - 87.5° @ 2.75 GHz
    - 87.2° @ 3.0 GHz
    - 88.2° @ 3.25 GHz
  - Measured 180.0°
    - 177.8° @ 2.75 GHz
    - 177.2° @ 3.0 GHz
    - 178.2° @ 3.25 GHz
  - Measured 5.6°
    - 6.0° @ 2.75 GHz
    - 5.0° @ 3.0 GHz
    - 3.7° @ 3.25 GHz
- Switching Speed: 300 ns Max., 100 ns Typ. - Measured 60.5 ns
- Power Supply:
  - +5 V @ 70 mA Typ., 100 mA Max. - Measured 1 mA
  - -15 V @ 70 mA Typ., 100 mA Max. - Measured 11 mA

PMI Website Link,
http://www.pmi-rf.com/Products/phaseshift-biphase-mod/phaseshifters/PDPS-3F-6-AL.htm
**8.0 PMI Model No. SDLVA-500M4G-CD-2, 0.5 to 4.0 GHz Successive Detection Logarithmic Video Amplifier**

PMI Model No. SDLVA-500M4G-CD-2 is a Successive Detection Log Video Amplifier (SDLVA) that offers a typical RF gain of 55 dB. This model has a log slope of 25 mV/dB typical 50 Ohm load. The unit has input power handling of +17 dBM CW maximum with a typical rise time of 5 ns and a typical recovery time of 40 ns. This model is supplied with SMA female connectors in a hermetically sealed housing measuring 3.20" x 1.80" x 0.40".

- Frequency Range: 0.5 to 4.0 GHz
- RF Gain (Small Signal): 55 dB Typ. - Measured 55.5 dB
- Video Flatness Over Frequency: ±50 mV Max. - Measured ±25 mV
- TSS: -73 dB Typ., -71 dB Max.
  - Measured -73.5 dBm @ -40°C
  - Measured -73.5 dBm @ +25°C
  - Measured -73.2 dBm @ +75°C
- VSWR J1, J2, J3 (50 Ohm): 2.0:1 Max. - Measured 1.57:1 In/1.82:1 Out
- PSAT: +13 dBm Typ. - Measured 11.80 dBm
- Harmonics (J2): 15 dBC Min. (-70 to 0 dBm J1 Input), (Excluding ODD Harmonics) - Measured 16.1 dBc
- Power Input: +17 dBm CW Max.
- Log Slope: 25 mV/dB Typ. 50 Ohm Load - Measured 26.0, 24.4, 23.4 mV/dB
- Log Linearity: ±2.5 dB (-40°C to +75°C) - Measured 0.91, -0.93, -1.40 dB
- DC Offset: 50 ± 50 mV - Measured +66 mV
- Pulse Range: 30 ns to CW - Measured 30 ns to CW
- Rise Time: 10 ns Max., 5 ns Typ. - Measured 7.9 ns
- Recovery Time: 60 ns Max., 40 ns Typ. - Measured 36.6 ns
- Power Supply
  - +15 V or +12 V @ 350 mA nominal - Measured +15 V @ 181 mA
  - -15 V or -12 V @ 180 mA nominal - Measured -15 V @ 98 mA

**PMI Website Link,**

**9.0 PMI Model No. P2T-1G1R1G-25-R-SFF-100W, 1.0 to 1.1 GHz SP2T Reflective Switch**

PMI Model No. P2T-1G1R1G-25-R-SFF-100W is a single pole, two throw, hermetically sealed reflective switch designed to operate over the 1.0 to 1.1 GHz frequency range. This model is designed to handle 100 Watts average input power and 5 kW peak having a 17 µs pulse width and 2% duty cycle. The unit has a low insertion loss of 0.8 dB maximum and a typical switching speed of 250 ns. This model is supplied with a TNC female (J1, J2, J3) connector and a 9-Pin Micro D (DC/Control) connector in a hermetically sealed housing measured 4.22" x 2.98" x 0.70".

- Frequency Range: 1.0 to 1.1 GHz
- Power: 5 kW Peak
- Average Power: 100 W
- Insertion Loss: 0.8 dB Max. - Measured 0.49 dB
- Isolation: 25 dB Min. - Measured 40.09 dB
10.0 PMI Model No. TD-30T-SHS-218, 2.0 to 18.0 GHz Threshold Detector

PMI Model No. TD-30T-SHS-218 is a high speed, TTL logic output threshold detector designed to operate from 2.0 to 18.0 GHz with a maximum dynamic range of +10 dBm and a VSWR input of 3.0:1 maximum @ -20 dBm. This detector has a propagation delay of 15 ns maximum. This model is supplied with SMA female connectors in a housing measured 2.2" x 1.5" x 0.4".

- Frequency Range: 2.0 to 18.0 GHz (Usable down to 0.5 GHz)
- VSWR Input: 3.0:1 Max. @ -20 dBm - Measured 2.9:1
- Minimum Signal Level for Logic 1:
  - -20 dBm @ 2.0 GHz - Measured -21.3 dBm @ 2.0 GHz
  - -17 dBm @ 18.0 GHz - Measured -22.1 dBm @ 18.0 GHz
- Threshold Variation Over Frequency (Any 1.0 GHz Window): ±0.5 dB - Measured ±0.48 dB
- Minimum Signal Level for Logic 0: -25 dBm - Measured -24.8 dBm
- Dynamic Range: +10 dBm Max. - Measured +10 dBm
- Propagation Delay (From 50% of an Input of -20 dBm): 15 ns Max.
- Propagation Delay (From 50% of an Input of +10 dBm): 15 ns Max.
- DC Power Supply: ±15 V @ 100 mA Max. - Measured +15 V @ 56.7 mA, -15 V @ 48.7 mA
- VSWR Input: 3.0:1 @ -20 dBm

PMI Website Link,
http://www.pmi-rf.com/Products/detectors/TD-30T-SHS-218-1.htm
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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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