Here's What's New...

New Product Releases from Planar Monolithics Industries, Inc.

February 13, 2018

1.0 PMI Model No. PE2-30-8R018R0-3R5-22-12-SFF, 8.0 to 18.0 GHz Low Noise Amplifier

PMI Model No. PE2-30-8R018R0-3R5-22-12-SFF is an 8.0 to 18.0 GHz, Low Noise Amplifier with a typical gain of 30 dB while maintaining a maximum gain flatness of ±1.5 dB over the operating frequency. The typical noise figure is 3.5 dB and offers a minimum OP1dB of 20 dBm. The operating voltage is +12 to +15 VDC with a maximum current draw of 325 mA. This model is supplied with removable SMA female connectors in our standard PE2 housing.

- Frequency Range: 8.0 to 18.0 GHz
- Gain: 30 dB Typ. - Measured 35.85 dB
- Gain Flatness: ±1.5 dB max. - Measured ±0.43 dB
- Noise Figure: 3.5 dB Typ. - Measured 4.49 dB @ 18.0 GHz
- OP1dB: 20 dB Min. - Measured ≥20 dBm
- VSWR In/Out: 2.0:1 Max. - Measured 1.56:1/1.86:1
- DC Voltage Supply: +12 to +15 VDC
- DC Current Draw: 325 mA Max. - Measured 310 mA

PMI Website Link,
http://www.pmi-rf.com/Products/amplifiers/PE2-30-8R018R0-3R5-22-12-SFF.htm
2.0 PMI Model No. DTA-18G40G-30-CD-2, 18.0 to 40.0 GHz 10-Bit Programmable Attenuator

PMI Model No. DTA-18G40G-30-CD-2 is a 10-Bit programmable 30 dB PIN diode attenuator with a step resolution as low as 0.06 dB over the frequency range of 18.0 GHz to 40.0 GHz. This model is supplied with 2.4 mm female connectors and a 15 Pin Micro-D female controlled connector in a slim line housing measuring 0.5" in height.

- Frequency Range: 18.0 to 40.0 GHz
- Mean Attenuation Range: 30 dB
- Insertion Loss: 6.0 dB Typ. - Measured 6.1 dB
- VSWR: 2.5:1 Max. - Measured 2.11:1
- Attenuation Flatness: ±1.5 dB Typ.
  Measured:
  @ 10 dB: ±0.98 dB
  @ 20 dB: ±1.27 dB
  @ 30 dB: ±1.93 dB
- Attenuation Accuracy: ±2.0 dB Typ.
  Measured:
  0 to 10 dB: ±0.39 dB
  10 to 20 dB: ±0.54 dB
  20 to 30 dB: ±0.76 dB
- Power Handling Capability: +24 dBm CW Max.
- Input 1 dB Compression: +10 dBm Typ.
- Switching Speed
  ○ On Time: 1.0 µs Max. - Measured 0.30 µs
  ○ Off Time: 0.5 µs Max. - Measured 0.20 µs
- Power Supply: +15 V @ 100 mA Max. - Measured +12 VDC @ 50 mA, +15 VDC @ 38 mA
- Logic Input
  ○ Logic "0" (Bit Off): -0.3 to +0.8 V
  ○ Logic "1" (Bit On): +2.0 to +5.0 V


3.0 PMI Model No. 8C1642D5-35-CD-SFF, Band Pass Filter

PMI Model No. 8C1642D5-35-CD-SFF is a Band Pass Filter centered at 1642.5 MHz with a nominal bandwidth of 35 MHz. It has a passband insertion loss of 1.5 dB and passband VSWR of 1.5:1. This model is supplied with SMA female connectors in a housing measuring 6.6" x 1.2" x 1.3".

- Center Frequency: 1642.5 MHz
- Bandwidth: 35.0 MHz - Measured 35.6 MHz
- Passband Insertion Loss: 1.5 dB - Measured 1.06 dB
- Passband VSWR: 1.5:1 - Measured 1.4:1
- Rejection: 8 Pole Response

PMI Website Link,
4.0 PMI Model No. EQL-17D6G21D6G-2DB-292MF, 17.6 to 21.6 GHz Equalizer

PMI Model No. EQL-17D6G21D6G-2DB-292MF is a passive amplitude equalizer that operates over the frequency range of 17.6 to 21.6 GHz. This unit has a maximum input power of 0.5 watts CW and a maximum VSWR of 2.0:1. This model is supplied with a 2.92 mm female input connector and a 2.92 mm output connector in a housing that measures 1.10" x 0.67" x 0.22"

- Frequency Range: 17.6 to 21.6 GHz
- Maximum Input Power: 0.5 Watts CW
- VSWR: 2.0:1 Max. - Measured 1.66:1
- Amplitude @ 17.6 GHz: -1 dB Min. - Measured -1.32 dB
- Slope:
  - Amplitude @ 17.6 GHz
  - Amplitude -2 dB @ 21.6 GHz
  - Amplitude = -0.5 dB/GHz
  - (Frequency above 17.6 GHz in GHz) + (Amplitude @ 17.6 GHz) - Measured -0.48 dB/GHz
- Linearity: ±0.5 dB

PMI Website Link,

5.0 PMI Model No. LM-18G40G-SMT-1, 18.0 to 40.0 GHz High Power Limiter

PMI Model No. LM-18G40G-SMT-1 is a high power limiter that operates from 18.0 to 40.0 GHz. This limiter can handle input power levels up to 20 Watts CW and provides a typical leakage of +14dBm. The insertion loss is 4.0 dB maximum with a VSWR of 2.0:1. The recovery time is 250 ns maximum. This limiter is supplied on a surface mount/drop-in carrier measuring only 0.270" x 0.198" x 0.016".

- Frequency Range: 18.0 to 40.0 GHz
- Insertion Loss: 4.0 dB Max. - Measured 2.94 dB
- Peak Power: 20 Watts (43 dBm) - Measured 20 Watts
- Pulse Width: 440 to 670 ns - Measured 440 to 670 ns
- PRF: 600 to 900 kHz - Measured 600 to 900 kHz
- Duty Cycle: 40% - Measured 40%
- Leakage Power: +14 dB Typ. - Measured 14 dBm
- 1 dB Recovery Time: 250 ns Max. - Measured <250 ns
- VSWR: 2.0:1 - Measured 1.85:1 In, 1.87:1 Out

PMI Website Link,
http://www.pmi-rf.com/Products/limiters/LM-18G40G-SMT-1.htm

6.0 PMI Model No. PS-90-2040-SY, 2856 MHz ± 15.0 MHz Bi-Phase Modulator/Phase Shifter
Model PS-90-2040-SY is a Miniature 0 to 180 Degree Bi-Phase Modulator / Phase Shifter with TTL Control Logic operating over a Frequency Range of 2856 MHz ± 15 MHz. This model provides low loss of 1.0 dB maximum and offers a fast switching time of 50 ns maximum. This model is designed to handle an input power level of 1 watt. The unit measures 1.39" x 1.0" x 1.0" and is supplied with a SMA female RF connector and a BNC female control connector.

- Frequency Range: 2856 MHz ± 15.0 MHz
- RF Impedance: 50 Ohms
- Differential Phase Shift: 180° ± 2° - Measured 179.66°
- Differential Insertion Loss: ±0.3 dB Max. - Measured ±0.26 dB
- Insertion Loss: 1.0 dB Max. - Measured 0.82 dB
- VSWR Input: 1.2:1 Max. - Measured 1.14:1
- Control Input: TTL
- Switching Time: 50 ns Max., 10% to 90%
- RF Input Power: 1.0 Watts CW Max.
- Power Supply:
  - +5 V @ 70 mA - Measured 38 mA
  - -12 V @ 30 mA - Measured 10 mA

PMI Website Link,
http://www.pmi-rf.com/Products/phaseshift-biphasemod/biphasemodulators/PS-90-2040-SY.htm

7.0 PMI Model No. PD-CD-001-1, 9.3 to 9.9 GHz 4-Way Phase Divider

PMI Model No. PD-CD-001-1 is a 4-Way Phase Divider with 0°, 90°, 180°, and 270° outputs. This model offers insertion loss of 8.0 dB maximum with a VSWR of 2.0:1 maximum and a 50 Ohm impedance. It has a maximum amplitude balance of ±0.5 dB and a maximum phase balance of ±7°. This model can handle input power levels of up to 28 Watts CW and 750 Watts peak. This model is supplied with SMA female connectors in a housing that measures 2.35" x 1.70" x 0.50".

- Frequency Range: 9.3 to 9.9 GHz
- Insertion Loss: 8.0 dB Max. - Measured 6.97 dB Max.
- VSWR Input/Output: 2.01 Max. - Measured 1.6:1 Max.
- Impedance: 50 Ohms
- Amplitude Balance: ±0.5 dB Max. - Measured ±0.2 dB
- Phase Balance: ±7° Max. - Measured 4°
- Functionality:
  - J1 to J2: 0° Phase Shift
  - J1 to J3: 90° Phase Shift
  - J1 to J4: 180° Phase Shift
  - J1 to J5: 270° Phase Shift
- Input Power: 28 Watts CW, 750 Watts Peak

PMI Website Link,
http://www.pmi-rf.com/Products/power_divider/PD-CD-001-1.htm

8.0 PMI Model No. SDLVA-2D5G4D9G-60-50MV, 2.5 to 4.9 GHz Successive Detection Log Video Amplifier
PMI Model No. SDLVA-2D5G4D9G-60-50MV is a Successive Detection Log Video Amplifier (SDLVA) that offers -60 to 0 dBm dynamic range over the frequency range of 2.5 to 4.9 GHz. This model has a log slope of 50.5 ± 5% mV/dB. The unit has input power handling of +20 dBm CW maximum with a duty cycle of 0 to 100%.

- Frequency Range: 2.5 to 4.9 GHz
- Dynamic Range: -60 to 0 dBm
- Input RF Power Handling: +20 dBm CW Max.
- Duty Cycle: 0 to 100%
- Pulse Width: 100 ns to CW
- VSWR: 2.0:1 at J1 and J2 (50 Ohms ± 2 nominal)
- RF Gain: 50 dB Min.
- RF Saturated Power:
  - +15 dBm RF Output Max.
  - 1 dB gain compression to be +6 dBm Min.
- Tangential Sensitivity: -70 dBm Min. (J3) - Measured -74 dBm
- Log Video Load Imp.: 93 ± 5 Ohms
- Log Video Linearity: +1.5 dB Max. over Input Dynamic Range
- Log Slope: 50.5 ± 5% mV/dB - Measured 49.8 to 51.5 mV/dB
- Absolute Log Video Output: 0.423 ± 0.075 with RF Input of -55 dBm - Measured 0.409 V / 0.437 V
- AVG Log Video Output:
  - 0.17 V ± 0.05 V with RF Input of -60 dBm - Measured 0.187 V
  - 3.2 V ± 0.05 V with RF Input of 0 dBm - Measured 3.206 V
- Flatness:
  - <4.0 dB @ -60 to -50 dBm Input - Measured 0.8 dB
  - <6.0 dB @ -50 to 0 dBm Input - Measured 1.5 dB
- No Sig Output Voltage: >140 mV Below Output Voltage at -60 dBm - Measured 240 mV Min.
- Rise Time: 20 ns (10 to 90%) - Measured 9.3 ns
- Fall/Recovery Time: 50 ns (90 to 10%) - Measured 26.8 ns
- Pulse Delay: 90% RF Input to 90% Log Video Pulse @ <35 ns - Measured 16.4 ns
- Log Video Output CW & Pulse:
  - Leading Edge Overshoot 1.0 dB up to -35 dBm
  - 2.5 dB from -35 to 0 dBm
  - 35 ns to recover within 0.6 dB of final value
- DC Power
  - +12 VDC ± 3%, 200 mV P-P Ripple @ 500 mA Max. - Measured 365 mA
  - -12 VDC ± 3%, 200 mV P-P Ripple @ 180 mA Max. - Measured -65 mA

PMI Website Link, http://www.pmi-rf.com/Products/SDLVA/SDLVA-2D5G4D9G-60-50MV.htm

9.0 PMI Model No. P1T-500M40G-55-T-292FF, 0.5 to 40.0 GHz SPST Absorptive Switch

PMI Model No. P1T-500M40G-55-T-292FF is an SPST, High Speed, Absorptive Switch that operates from 0.5 to 40.0 GHz. This model offers a typical isolation of 74 dB and a maximum insertion loss of 5.5 dB. This model has a typical switching speed of 25 ns. This unit is supplied with 2.92 mm female connectors in a housing that measures 1.0" x 1.0" x 0.5".

- Frequency Range: 0.5 to 40.0 GHz
- Isolation: 74 dB Typ., 55 dB Min. - Measured 74.96 dB
Insertion Loss: 5.5 dB Max. - Measured 5.13 dB
VSWR In/Out: 2.0:1 Typ., 2.5:1 Max. - Measured 2.09:1/1.87:1
Operating Input Power: +20 dBm CW Max.
Switching Speed: 25 ns Typ., 100 ns Max. - Measured <25 ns
DC Voltage: ±5 V @ 20 mA Typ.
Control Signal
  - TTL Compatible
  - "0" = On
  - "1" = Off

PMI Website Link,
http://www.pmi-rf.com/Products/Switches/P1T-500M40G-55-T-292FF.htm

10.0 PMI Model No. TD-1G12G-RL-CD-SFF, 1.0 to 12.0 GHz Threshold Detector

PMI Model No. TD-1G12G-RL-CD-SFF is a high speed threshold detector designed to operate over the 1.0 to 12.0 GHz frequency range, with an adjustable threshold level of -30 to -10 dBm and a VSWR of 3.0:1 typical. 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: 1.0 to 12.0 GHz
- VSWR: 3.01 Typ. - Measured 3.0:1
- Dynamic Range: -30 to +10 dBm - Measured -30 to +10 dBm
- Threshold Variation (With Frequency): ±1.5 dB Max. - Measured ±1.2 dB
- Propagation Delay: 10 ns Typ., 3 dB above threshold setting (50% RF Input to 50% Logic at -10 dBm) - Measured 11 ns
- Minimum Pulse Width: 50 ns Typ. - Measured 50 ns
- 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 0 to +5 V
- Threshold Level Setting Range: -30 to -10 dBm - Measured -30 to -10 dBm
- Input Power: 100 mW CW Max. - Measured 100 mW CW
- Power Supply: ±5 V @ 100 mA Typ.
  Measured:
  +5 V @ 75 mA
  -5 V @ 29 mA

PMI Website Link,
http://www.pmi-rf.com/Products/detectors/TD-1G12G-RL-CD-SFF.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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