Here's What's New...

New Product Releases from
Planar Monolithics Industries, Inc.
January 11, 2018

*** NEW RELEASES ***

1.0 PMI Model No. PL-MCU-ENET-TTL-MAH, Ethernet Micro-Controller Test Box

PMI Model No. PL-MCU-ENET-TTL-MAH is an Ethernet Microcontroller Test Box which allows for an ethernet command to be sent up to 18 parallel TTL output bits. This controller can be used with many PMI products that required parallel digital commands, such as switches, attenuators, phase shifters and IQ Modulators.

- Size: 4.5" x 3.0" x 1.5"
- DC Power Connector: D-9 Male
- Output Connector: D-25 Female
  - Pin 1: TTL1 (MSB)
  - Pin 2: TTL2
  - Pin 3: TTL3
  - Pin 4: TTL4
  - Pin 5: TTL5
  - Pin 6: TTL6
  - Pin 7: TTL7
  - Pin 8: TTL8
  - Pin 9: TTL9
Pin 10: TTL10
Pin 11: TTL11
Pin 12: TTL12
Pin 13: TTL13
Pin 14: TTL14
Pin 15: TTL15
Pin 16: TTL16
Pin 17: TTL17
Pin 18: TTL18 (LSB)
Pin 19: Ground
Pin 20 thru 25: No Connection

- Ethernet Connector: RJ-45
- Power Supply: +5 V @ 150 mA
- IP Address: Factory Preset

PMI Website Link,
http://www.pmi-rf.com/Products/multifunctionmodules/PL-MCU-ENET-TTL-MAH.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 and draws only 40 mA of current. 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 2.92mm 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".

- 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:
    ±0.59 dB @ 0 to 10 dB
    ±0.09 dB @ 10 to 20 dB
    ±0.20 dB @ 20 to 30 dB
- Attenuation Flatness:
  - Measured:
    ±0.95 dB @ 10 dB
    ±1.47 dB @ 20 dB
    ±2.13 dB @ 30 dB
- Minimum Attenuation Step: 1.0 dB
- Survival Power Handling: +24 dBm CW Max.
- Switching Time:
  - On Time: 1 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

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

3.0 PMI Model No. 15CL32G-16G-292FF, 24.0 to 40.0 GHz, Bandpass Filter

PMI Model No. 15CL32G-16G-292FF is a 24.0 to 40.0 GHz, Bandpass Filter with maximum insertion loss of 3.0 dB and a maximum passband ripple of 1.0 dB. This model is supplied with removable 2.92mm female connectors in a housing measuring 1.28" x 0.60" x 0.35".

- 1 dB Bandwidth: 24.0 to 40.0 GHz
- Rejection:
  - 60 dB @ DC to 18.0 GHz - Measured >60 dB
  - 40 dB @ 42.0 to 50.0 GHz - Measured >40 dB
- Insertion Loss: 3.0 dB Max. - Measured 2.48 dB
- Passband Ripple: 1.0 dB Max. - Measured <1 dB

PMM Website Link  
http://www.pmi-rf.com/Products/filters/15CL32G-16G-292FF.htm

4.0 PMI Model No. PIQ-2G18G-360-16-CD-1, 2.0 to 18.0 GHz, High Performance I/Q Vector Modulator

PMI Model No. PIQ-2G18G-360-16-CD-1 is a 2.0 to 18.0 GHz, high performance I/Q Vector Modulator with 2 x 12 bit monotonic TTL compatible channels (I and Q). This model offers a full 360° of phase shift with a minimum of 16 dB of amplitude control. This model is supplied with SMA female, RF connectors, and a sub miniature D multi-pin control connector in a housing measuring 4.25" x 3.50" x 1.00".

- Frequency Range: 2.0 to 18.0 GHz
- Dynamic Range: 16 dB & 360°
- RF Input Power: +10 dBm CW, 1.0 Watt Max.
- Insertion Loss: 16.0 dB Max. - Measured 14.74 dB
- VSWR: 2.2:1 Max. (50 Ω System) - Measured 1.86:1
- Attenuation vs Frequency: ±3.5 dB Typ.  
  Measured:
  ±1.19 dB @ 0 dB Attenuation  
  ±1.41 dB @ 8 dB Attenuation  
  ±2.91 dB @ 16 dB Attenuation
- Phase vs Frequency: ±20.0° Typ.  
  Measured:
  ±9.66° @ 0 dB Attenuation  
  ±12.35° @ 8 dB Attenuation  
  ±18.23° @ 16 dB Attenuation
- Control Logic: 2 x 12 Bits (I & Q), TTL Compatible
- Control Slopes: Linear
- Switching Speed: 500 ns Max. - Measured 416 ns
- Power Supply: ±12 V to ±15 V @ 100 mA Max.
  Measured:
  +15 V @ 65 mA
  -15 V @ 76 mA

PMI Website Link,  
http://www.pmi-rf.com/Products/iq_vector_modulator/PIQ-2G18G-360-16-CD-1.htm

5.0 PMI Model No. APD-4-400M3G-17-SFF-75W, 0.4 to 3.0 GHz 4-Way Power Divider

PMI Model No. APD-4-400M3G-17-SFF-75W is a 0.4 to 3.0 GHz, Four Way Power Divider featuring high isolation, low insertion loss, low VSWR, and has excellent phase and amplitude balance. This model is supplied with SMA female connectors in a housing measuring 6.10" x 7.09" x 0.39".

- Frequency Range: 0.4 to 3.0 GHz
- Insertion Loss: 1.8 dB Max. - Measured 1.37 dB  
  (Above 6.02 dB Split)
- VSWR: 1.5:1 Max. - Measured 1.3:1
- Isolation: 17 dB Min. - Measured 19 dB
- Amplitude Balance: ±0.5 dB Max. - Measured +0.15 dB/ -0.08 dB
- Phase Balance: ±6° Max. - Measured +0.4°/ -1.07°
- Power Handling:
  - Forward: 75 W Max. - Measured 75 W
  - Reverse: 5 W Max. - Measured 5 W
- Impedance: 50 Ω

PMI Website Link,  
http://www.pmi-rf.com/products/power_divider/APD-4-400M3G-17-SFF-75W.htm

6.0 PMI Model No. P2T-100M18G-60-T-515-SFF-4W, 0.1 to 18.0 GHz SP2T, High Power Absorptive Switch

PMI Model No. P2T-100M18G-60-T-515-SFF-4W is an absorptive, single pole, two throw PIN diode switch that operates over the 100 MHz to 18.0 GHz frequency range. This switch is designed to handle input power levels up to 4 Watts CW and maintain speeds of less than 200 ns. This model is supplied with SMA female connectors, in a housing measuring 1.0" x 1.0" x 0.4".

- Frequency Range: 0.1 to 18.0 GHz
- Isolation: 60 dB Min. - Measured 68.75 dB
- Insertion Loss: 3.5 dB Max. - Measured 3.32 dB
- VSWR: 2.0:1 Max - Measured 1.91:1
Operating Input Power: 4 Watts CW Max.  
RF Switching Speed: 200 ns Max. - Measured 55 ns  
DC Voltage: +5 & -15 VDC  
Control Signal: 2 Bit TTL

PMI Website Link,  
http://www.pmi-rf.com/Products/Switches/P2T-100M18G-60-T-515-SFF-4W.htm

7.0 PMI Model No. P2T-8G18G-40-R-TFF-120W, 8.0 to 18.0 GHz, SP2T High Power, Reflective Switch

PMI Model No. P2T-8G18G-40-R-TFF-120W is a reflective, single pole, two throw pin diode switch that operates over the 8.0 to 18.0 GHz frequency range. This switch is designed to handle input power levels up to 120 Watts CW and maintain speeds of less than 200 ns. This model is supplied with TNC female RF connectors and a 9 Pin Micro D type female Control connector, in a housing measuring 2.00" x 2.00" x 0.75".

- Frequency Range: 8.0 to 18.0 GHz  
- Power: 120 W CW - Measured 125.89 W  
- Insertion Loss: 2.2 dB Max. At band edges for 20% bandwidth and typically 1.75 dB Goal. For mid-band of 80% of the bandwidth 2.0 dB Max., and typically 1.5 dB Goal - Measured 2.17 dB  
- Isolation: 40 dB Typ. - Measured 39.44 dB  
- Switching Speed: 1.25 us Max. - Measured 1.1 us  
- (50% TTL to 90% RF and 50% TTL to 10% RF)  
- VSWR (In/Out): 2.0:1 Max - Measured 2.2:1/2.26:1  
- Load VSWR: Better than 1.5:1 Max. - Measured 1.5:1  
- DC Voltage & Current:  
  - +5 V @ 300 mA - Measured 300 mA  
  - -70 V @ 60 mA - Measured 0 mA  
- Control: Single TTL (TTL "0" J1-J3 Low Loss)

PMI Website Link,  
http://www.pmi-rf.com/Products/Switches/P2T-8G18G-40-R-TFF-120W.htm

8.0 PMI Model No. P4T-100M18G-80-T-515-SFF-4W-IND, 0.1 to 18.0 GHz, SP4T High Power, Absorptive Switch

PMI Model No: P4T-100M18G-80-T-515-SFF-4W-IND is a Single Pole, Four Throw Switch operating from 0.1 to 18.0 GHz. It offers 80 dB minimum of isolation with a maximum insertion loss of 6.0 dB. This switch has a maximum switching speed of 200 ns and a maximum output power of 36 dBm CW. This unit is supplied with SMA female connectors and is housed in a radial package with a 1.25" diameter by 0.40" thick.

- Frequency Range: 0.1 to 18.0 GHz  
- Insertion Loss: 4.5 dB Typ., 6.0 dB Max. - Measured 5.43 dB
PMI Model No. P8T-100M40G-85-T-512-292FF-ROHS is a high speed, single pole, eight throw, absorptive switch operating over the frequency range of 0.1 to 40.0 GHz. It is capable of switching within 30 ns and has over 90 dB of isolation up to 18 GHz, 80 dB up to 26.5 GHz and 70 dB up to 40 GHz. This model is supplied with 2.92 mm female connectors in a gold plated housing measuring 4.0" x 1.5" x 0.4". This item is ROHS compliant.

- Frequency Range: 0.1 to 40.0 GHz
- Isolation:
  - 90 dB Min. (0.1 to 18.0 GHz) - Measured 90.22 dB
  - 80 dB Min. (18.0 to 26.5 GHz) - Measured 92.20 dB
  - 70 dB Min. (26.5 to 40.0 GHz) - Measured 71.00 dB
- Insertion Loss: 10 dB Max.
  - 6 dB Typ. (0.1 to 18.0 GHz) - Measured 5.17 dB
  - 7 dB Typ. (18.0 to 26.5 GHz) - Measured 5.60 dB
  - 9.5 dB Typ. (26.5 to 40.0 GHz) - Measured 9.18 dB
- VSWR (In/Out): 2.5:1 Typ. - Measured 2.7:1/ 2.65:1
- Operating Input Power: +20 dBm CW
- Switching Speed: 100 ns Max. - Measured 37 ns (On), 38 ns (Off)
- DC Voltage & Current:
  - +5 VDC @ 180 mA - Measured 161 mA
  - -12 VDC @ 65 mA - Measured 65 mA
PMI Model No. P16T-18G40G-90-T-512-SFF-DEC is a single pole, sixteen throw, absorptive PIN diode switch that operates from 18.0 to 40.0 GHz. This model has a typical insertion loss of 12 dB and minimum 50 dB of isolation. It operates at 20dBm CW and is controlled with 4-Bit decoded TTL logic. This model is supplied with 2.92mm female connectors in a gold plated housing measuring 8.00" x 3.00" x 0.65".

- Frequency Range: 18.0 to 40.0 GHz
- Insertion Loss: 12 dB Typ. - Measured 10.38 dB
- Isolation: 50 dB Min. - Measured 55.13 dB
- VSWR (In/Out) - 2.5:1 Typ. - Measured 2.39:1
- VSWR (Output/Off) - 2.5:1 Typ. - Measured 2.24:1
- Switching Speed
  - Rise/Fall: 50 ns Typ./ 10 ns Typ. - Measured 13 ns/ 6 ns
  - Delay On/Off: 150 ns Max. - Measured 100.5 ns
- Input Power: +20 dBm CW
- Control: 4-Bit Decoded TTL Logic
- Power Supply:
  - +5 VDC @ 750 mA - Measured 470 mA
  - -12 VDC @ 200 mA - Measured 176 mA

PMI Website Link,
http://www.pmi-rf.com/Products/switches/P16T-18G40G-90-T-512-SFF-DEC.htm

*** For more information on PMI's complete line of products, please visit ***
http://www.pmi-rf.com

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Sincerely,

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