Here's What's New...

**New Product Releases from Planar Monolithics Industries, Inc.**

**August 15, 2018**

1.0 PMI Model No. PE2-35-1G13G-2R5-10-12-SFF, 1.0 to 13.0 GHz Low Noise Amplifier

PMI Model No. PE2-35-1G13G-2R5-10-12-SFF is a 1.0 to 13.0 GHz Low Noise Amplifier which provides a minimum gain of 35 dB while maintaining a maximum gain flatness of ±1.5 dB. The noise figure is 2.5 dB maximum and offers a minimum OP1dB of 12 dBm. The unit is supplied with SMA female connectors in a housing measuring 1.08" x 0.71" x 0.29".

- Frequency Range: 1.0 to 13.0 GHz
- Gain: 35 dB Min.
- Gain Flatness: ±1.5 dB Max. - Measured ±2.16 dB Max.
- Noise Figure: 2.5 dB Max. @ 25°C
- OP1dB: 12 dBm Min. - Measured 15 dBm Min.
- VSWR In/Out: 2.0:1 Max.
- DC Supply: +12 VDC @ 250 mA Max. - Measured 244 mA

**PMI Website Link,**

https://www.pmi-rf.com/products-details/pe2-35-1g13g-2r5-10-12-sff
2.0 PMI Model No. PBB-20-218-16-LCA, 2.0 to 18.0 GHz Low Noise Amplifier

PMI Model No. PBB-20-218-16-LCA is a 2.0 to 18.0 GHz Low Noise Amplifier which provides 20 dB of gain while maintaining a gain flatness of ±2.0 dB maximum over the operating frequency. The noise figure is 4 dB typical and offers a typical OP1dB of +14 dBm. The amplifier requires +12 to +15 VDC and the current draw is 150 mA typical. The unit is supplied with SMA female connectors in our standard PE2 housing.

- Frequency Range: 2.0 to 18.0 GHz
- Gain: 20 dB - Measured +20.6 dB Min., +23.6 dB Max.
- Gain Flatness: ±2.0 dB - Measured ±1.52 dB
- Noise Figure: 4.0 dB Typ. - Measured 4.2 dB
- OP1dB: 14 dBm - Measured 15.7 dBm
- VSWR In/Out: 2.0:1 - Measured 1.4:1/1.4:1
- DC Voltage Supply: +12 to +15 VDC
- DC Current Draw: 150 mA - Measured +12 VDC @ 139 mA

PMI Website Link,

3.0 PMI Model No. 8C1542D5-35-CD-SFF, Band Pass Filter

PMI Model 8C1542D5-35-CD-SFF is a band pass filter centered at 1542.5 MHz with a nominal bandwidth is 35 MHz. This model offers a low insertion loss of 1.5 dB maximum and maintains a passband VSWR of 1.5:1 maximum. This filter is supplied with SMA female connectors in a housing measuring 6.6" x 1.2" x 1.3".

- Center Frequency: 1542.5 MHz
- Bandwidth: 35 MHz - Measured 35.9 MHz
- Passband Insertion Loss: 1.5 dB - Measured 1.17 dB
- Passband VSWR: 1.5:1 - Measured 1.4:1
- Rejection: 8 Pole Response

PMI Website Link,

4.0 PMI Model No. LM-218-14-200W-SMF-HERM, 2.0 to 18.0 GHz High Power Limiter

PMI Model No. LM-218-14-200W-SMF-HERM is a high power limiter that operates from 2.0 to 18.0 GHz and handles 200 Watts Peak Power with pulse widths of 1 usec and 0.1% duty cycle or 1 Watt CW. This model offers low loss of 2 dB maximum and a fast recovery of less than 100nsec. It is supplied with a SMA male connector and SMA female connector in a hermetically sealed housing measuring 0.75" x 1.00" x 0.30".

- Frequency Range: 2.0 to 18.0 GHz
PMI Website Link,
https://www.pmi-rf.com/products-details/lm-218-14-200w-smf-herm-

5.0 PMI Model No. DTO-6G19G-CD-1, 6.0 to 19.0 GHz Digitally Controlled Oscillator

PMI Model No. DTO-6G19G-CD-1 is a digitally controlled oscillator that operates from 6.0 to 19.0 GHz. The maximum frequency drift is ±0.1 MHz/°C and the maximum frequency settling is ±4.0 MHz within 1 usec. This model also has a typical phase noise of -60 dBc/Hz @ 100 kHz offset.

- Frequency Range: 6.0 to 19.0 GHz
- Frequency Accuracy: ±0.1% Max. @ +25°C - Measured ±0.09%
- Frequency Drift: ±0.1 MHz/°C Max. - Measured ±0.1 MHz
- Frequency Settling: ±4.0 MHz Max. within 1 usec
- Modulation:
  - Bandwidth: DC to 10 MHz Min.
  - Sensitivity Variation: 1.1:1 Max.
  - Frequency Deviation Bandwidth: ±250 MHz Min. @ 2 V Peak-Peak - Measured ±250 MHz
- RF Power:
  - Output: +10 dBm Min. - Measured +10.5 dBm
  - Variation: ±3.0 dB Max. Including Temperature and Frequency - Measured ±2.5 dB
- Phase Noise: -60 dBc/Hz Typ. @ 100 kHz Offset - Measured -60 dBc/Hz
- Harmonics: -30 dBc Max. - Measured -30 dBc
- Sub Harmonics (f/2, 3f/2): -55 dBc Max. - Measured -55 dBc
- Spurious: -55 dBc Max. - Measured -55 dBc
- Pulling: ±1 MHz Max. @ VSWR 2:1
- Pushing: ±500 kHz/V Max.
- Linearized Frequency Tuning Step Size: LSB 0.5 MHz Nominal for Full-Band
- DC Power:
  - +15 V ± 0.5 V @ 1.0 A - Measured +15 V ± 0.5 V @ 1249 mA
  - +15 V ± 0.5 V @ 0.3 A - Measured +15 V ± 0.5 V @ 176 mA
  - +5 V ± 0.5 V @ 0.5 A - Measured +5 V ± 0.5 V @ 25 mA
  - +28 V ± 2 V @ 3.0 A - Measured +28 V ± 2 V @ 2 A
  - 6.0 A (Turn On Current)

PMI Website Link,
https://www.pmi-rf.com/products-details/dto-6g19g-cd-1

6.0 PMI Model No. DLVA-7M-80-SFF, 0.0055 to 0.0085 GHz Detector Log Video Amplifier
PMI Model No. DLVA-50M18D5G-40-LIN-LOG-CD-1 is a low frequency Detector Log Video Amplifier (DLVA) designed to operate from 0.0055 to 0.0085 GHz. This model has a log slope of 25 mv/dB nominal and a maximum rise time (10% to 90%) of 360 ns. It is supplied with SMA connectors in a housing measuring 2.20" x 1.50" x 0.55".

- Frequency Range: 0.0055 to 0.0085 GHz
- Output Voltage: 0.2 to 2.0 V (-70 to 0 dBm Input)
- TSS: -80 dBm
- Log Slope: 25 mV/dB Nominal - Measured 23.89 mV/dB
- Log Linearity: ±1.0 dB Max. - Measured ±0.57 dB
- Bandwidth: 3 MHz Min.
- Rise Time (10% to 90%): 360 ns Max. - Measured <360 ns
- DC Power Supply:
  - +5 V @ 60 mA - Measured +50 mA
  - -5 V @ 5 mA - Measured -7 mA

PMI Website Link,
https://www.pmi-rf.com/products-details/dlva-7m-80-sff

7.0 PMI Model No. SDLVA-500M4G-CD-1, 0.5 to 4.0 GHz Successive Detection Log Video Amplifier

PMI Model No. SDLVA-500M4G-CD-1 is a Successive Detection Log Video Amplifier (SDLVA) offers 70 dB Dynamic Range over the frequency range of 0.5 to 4.0 GHz. This model offers an ultra-fast rise time of 10 ns maximum, a recovery time of less than 60 ns and a limited RF Output of +7 dBm. The unit is temperature compensated such that log linearity over temperature remains less than ±2.5dB over the full operating temperature range of -40 to +70°C. 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: 0.5 to 4.0 GHz
- RF Gain (Small Signal): 55 dB Typ.
- Video Flatness over Frequency: ±50 mV Max.
- TSS: -73 dB Typ., -71 dB Max. - Measured -73 dBm
- VSWR: 2.0:1 - Measured 1.70:1
- PSAT: +7 dBm Typ.
- Power Input: +17 dBm Typ. - Measured +17 dBm CW Max.
- Log Slope: 25 mV/µdB Typ. 50 Ohm Load - Measured 24.7 mV/µdB
- Log Range: -70 to 0 dBm - Measured -70 to 0 dBm
- Log Linearity: ±2.5 dB (-40°C to +75°C) - Measured ±0.9 dB
- DC Offset: 50 ± 50 mV
- Pulse Range: 30 ns to CW - Measured 30 ns to CW
- Rise Time: 10 ns (5 ns Typ.) - Measured 9.1 ns
- Recovery Time: 60 ns (40 ns Typ.) - Measured 55 ns
- Power Supply:
  - +15 V or +12 V @ 350 mA Nominal - Measured +15 VDC @ 271 mA
  - -15 V or -12 V @ 180 mA Nominal - Measured -15 VDC @ 93 mA

PMI Website Link,
https://www.pmi-rf.com/products-details/sdlva-500m4g-cd-1
8.0 PMI Model No. P1T-200M18G-80-T-SFF-RL, 0.2 to 18.0 GHz SPST Absorptive Switch

PMI Model No. P1T-200M18G-80-T-SFF-RL is a solid-state, single Pole, single throw absorptive switch that operates from 0.2 to 18.0 GHz. This switch offers a maximum insertion loss of 3.5 dB, minimum isolation of 70 dB and a switching speed of less than 30 ns. It is supplied with SMA female connectors in a housing measuring 1.0" x 1.0" x 0.5".

- Frequency Range: 0.2 to 18.0 GHz
- Insertion Loss: 3.5 dB Max. - Measured 2.4 dB
- Isolation:
  - 70 dB Min. (0.2 to 0.5 GHz)
  - 80 dB Min. (0.5 to 18.0 GHz) - Measured 86.3 dB
- VSWR In/Out: 2.0:1 Max. - Measured 1.9:1
- Switching Speed:
  - 10 ns (Rise/Fall) - Measured <5 ns
  - 15 ns (Delay On) - Measured <5 ns
  - 30 ns (Delay Off) - Measured <10 ns
- Operating Power: +27 dBm "Hot Switching" Max.
- Control:
  - TTL Logic "0" = Off
  - TTL Logic "1" = On
- Power Supply:
  - +5 V @ 50 mA Max. - Measured 25 mA
  - -12 V @ 75 mA Max. - Measured 37 mA

PMI Website Link,
https://www.pmi-rf.com/products-details/p1t-200m18g-80-t-sff-rl

9.0 PMI Model No. P8T-500M40G-50-T-55-SFF, 0.5 to 40.0 GHz SP8T Absorptive Switch

PMI Model No. P8T-500M40G-50-T-55-SFF is a high speed, single pole, eight throw, absorptive switch that operates over the frequency range of 0.5 to 40 GHz. This model provides a minimum of 50 dB of isolation and has a maximum insertion loss of 10 dB. The typical VSWR is 3.0:1 and the typical switching speed is 50 ns. This switch is supplied with 2.92 mm female connectors in a housing that measures 4.0" x 1.5" x 0.4".

- Frequency Range: 0.5 to 40.0 GHz
- Isolation: 50 dB Min. - Measured 69.17 dB
- Insertion Loss: 10 dB Max. - Measured 7.64 dB
- VSWR In/Out: 3.0:1 Typ. - Measured 2.38:1
- Operating Input Power: +20 dBm CW
- Switching Speed: 50 ns Typ. - Measured 27 ns
- DC Voltage and Current:
  - +5 VDC @ 70 mA - Measured @ 65 mA
  - -5 VDC @ 20 mA - Measured @ 17 mA
- Control Signal: Eight Line TTL

PMI Website Link,
10.0 PMI Model No. TD-30T-SHS-218-30DBAMP-DAC-DS, 2.0 to 18.0 GHz
Threshold Detector

PMI Model No. TD-30T-SHS-218-30DBAMP-DAC-DS is an ultra high speed, high sensitivity threshold detector that operates from 2.0 to 18.0 GHz. This model has a minimum signal level for threshold detector to respond of -45 dBm. It is supplied with SMA female connectors in a housing measuring 2.5" x 2.0" x 0.5".

- Frequency Range: 2.0 to 18.0 GHz
- Minimum Signal Level for Threshold Detector to Respond: -45 dBm - Measured -67 dBm @ 2.0 GHz, -62 dBm @ 18.0 GHz
- Propagation Delay from 50% Monitor Logic Output on Leading Edge for an Input of -45 dBm: 15 ns Typ., 30 ns Max. - Measured 27 ns
- Propagation Delay from 50% RF Input to 50% Logic Output when Input -45 dBm: 30 ns Typ., 45 ns Max. - Measured 27 ns
- Threshold Level Range:
  - 20 dB @ 2.0 GHz - Measured 25 dB @ 2.0 GHz
  - 20 dB @ 10.0 GHz - Measured 26 dB @ 10.0 GHz
  - 20 dB @ 18.0 GHz - Measured 26 dB @ 18.0 GHz
- DC Power:
  - +12 V (No Load): 300 mA Typ. - Measured 350 mA
  - -12 V (No Load): 120 mA Typ. - Measured 34 mA

PMI Website Link,

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*** 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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