



**Presenting...**  
**New Product Releases from**  
**Planar Monolithics Industries, Inc.**  
**October 1, 2019**

**1.0 PMI Model No. SDLVA-1G20G-58-12-SFF, 1.0 to 20.0 GHz SDLVA**

PMI Model No. SDLVA-1G20G-58-12-SFF is a Successive Detection Log Video Amplifier (SDLVA) that operates over the frequency range of 1.0 to 20.0 GHz. It has a frequency flatness of  $\pm 2.0$  dB, a logging range of -54 to +5 dBm, and a typical log video output slope of 14 mV/dB. This unit is outfitted with SMA female connectors in our standard PE2 housing measuring 1.08" x 0.71" x 0.29".



- Frequency Range: 1.0 to 20.0 GHz
- Frequency Flatness:  $\pm 2.0$  dB - **Measured  $\pm 1.60$  dB**
- Log Linearity:  $\pm 1.0$  dB (Pin = -50 to 0 dBm) Typ.
- Log Linearity Over Temp:  $\pm 1.0$  dB (Pin = -30 dBm @ -55°C to +85°C) Typ.
- Logging Range: -54 to +5 dBm - **Measured -54 to +5 dBm**
- Input VSWR: 3.0:1 Typ.
- Log Video Output Voltage: 0.9 to 1.5 V Typ. - **Measured 0.9 to 1.7 V**
- Log Video Output Slope: 14 mV/dB Typ. - **Measured 14.1 mV/dB**
- Log Video Output Rise Time: 5 ns (Pin = -20 dBm @ 10% to 90%) - **Measured 3.98 ns**
- Log Video Output Fall Time: 20 ns (Pin = -20 dBm @ 90% to 10%) - **Measured 9.088 ns**
- Log Video Recovery Time: 28 ns (Pin = -50 to 0 dBm) - **Measured 18 ns**
- Log Video Propagation Delay: 15 ns
- Tangential Signal Sensitivity: -60 dBm TSS Typ. - **Measured -60 dBm**
- Video Output Load: 1 K Min.
- Operating Voltage: +12 to +15 VDC
- Operating Current: 100 mA Typ. - **Measured 98 mA**

## PMI Website Link,

<https://www.pmi-rf.com/product-details/sdlva-1g20g-58-12-sff>

## 2.0 PMI Model No. FD-1G-500M-55-SFF, 1.0 GHz Frequency Discriminator

PMI Model No. FD-1G-500M-55-SFF is a Frequency Discriminator operating at the center frequency of 1.0 GHz. It has a minimum peak to peak bandwidth of 500 MHz and a minimum input dynamic range of -10 to 0 dBm. This model is outfitted with SMA female connectors in a housing that measures 2.5" x 1.0" x 0.4".



- Center Frequency: 1.0 GHz
- Peak to Peak Bandwidth: 500 MHz Min.
- Sensitivity: 10 mV/MHz Typ. into 93 Ohms
- Accuracy:
  - $\pm 10$  MHz @  $+25^{\circ}\text{C}$  Typ.
  - $\pm 25$  MHz @  $0^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  Typ.
- Offset Adjust:  $\pm 100$  mV Min.
- Input Dynamic Range: -10 to 0 dBm Min.
- Rise Time: 10 ns Typ.
- Input VSWR: 2.0:1 Max. - Measured 1.98:1
- DC Power Supply:
  - +5 V @ 25 mA Typ. (No Load) - Measured +15 VDC @ 25 mA
  - -5 V @ 70 mA Typ. (No Load) - Measured -15 VDC @ 5 mA

## PMI Website Link,

<https://www.pmi-rf.com/product-details/fd-1g-500m-55-sff>

## 3.0 PMI Model No. PEC-30-8G12G-6R0-28-15-SFF, 8.0 to 12.0 GHz Amplifier

PMI Model No. PEC-30-8G12G-6R0-28-15-SFF is a 8.0 to 12.0 GHz Amplifier. It has a minimum gain of 30 dB, a maximum gain flatness of  $\pm 1.5$  dB, and a maximum noise figure of 6 dB. This amplifier is supplied with SMA female connectors in a housing that measures 2.80" x 1.12" x 0.44".



- Frequency Range: 8.0 to 12.0 GHz
- Gain: 30 dB Min. - Measured +36 dB
- Gain Flatness:  $\pm 1.5$  dB Max. - Measured  $\pm 1.32$  dB
- Noise Figure: 6 dB Max. - Measured 3.2 dB
- OP1dB: +28 dBm Min., +30 dBm Typ. - Measured +24.74 dBm Min., +26.69 dBm Typ.
- Input VSWR: 2.0:1 Max. - Measured 1.41:1
- Output VSWR: 2.2:1 Max., 2.0:1 Typ. - Measured 2.18:1
- DC Supply: +12 to +15 VDC @ 450 mA - Measured 430 mA

## PMI Website Link,

<https://www.pmi-rf.com/product-details/pec-30-8g12g-6r0-28-15-sff>

## 4.0 PMI Model No. ADA-0520F-65-OPT6G18G-PTB, 6.0 to 18.0 GHz Portable Adjustable Threshold Detector

PMI Model No. ADA-0520F-65-OPT6G18G-PTB is a Portable Adjustable Threshold Detector operating over the 6.0 to 18.0 frequency range. It has a maximum threshold variation of  $\pm 1.5$  dB and a power input of +10 dBm. This model is outfitted with a SMA female connector and a BNC female connector in a housing that measures 4.92" x 4.92" x 2.26".



- Frequency Range: 6.0 to 18.0 GHz
- Minimum Signal Level for Threshold Setting: -45 dBm  $\pm$  2.5 dB
- Threshold Variation (Flatness):  $\pm 1.5$  dB Max.
- Power Input: +10 dBm
- Input Signal: From 20 ns Pulse to CW
- Output Level Detected: 0 V & 2.5 V Min. under 50 Ohms (TTL)
- Output Stability:  $\pm 3.0$  dB (Between -50°C to +85°C)
- Rise Time: 10 ns Typ., 20 ns Max. - **Measured 3.5 ns Typ.**
- Propagation Delay: 10 ns Typ., 20 ns Max. - **Measured 12.1 ns Typ.**
- Recovery Time: 60 ns Max. - **Measured 8.6 ns Max.**
- AC Voltage Supply: 220 to 230 VAC

#### PMI Website Link,

<https://www.pmi-rf.com/product-details/ada-0520f-65-opt6g18g-ptb>

## 5.0 PMI Model No. P6T-2G18G-55-R-512-SFF, 2.0 to 18.0 GHz, SP6T Reflective Switch

PMI Model No. P6T-2G18G-55-R-512-SFF is a Single Pole, Sixth Throw, Reflective Switch that operates over the frequency range of 2.0 to 18.0 GHz. It has a maximum VSWR of 2.0:1, a maximum insertion loss of 7 dB, and a minimum isolation of 55 dB. This unit is supplied with SMA female connectors in a housing measuring 1.00" x 1.00" x 0.50".



- Frequency Range: 2.0 to 18.0 GHz
- Insertion Loss: 7 dB Max. - **Measured 4.5 dB**
- Input Power: 10 dBm CW Max.
- RF Power Survival: 25 dBm
- VSWR In/Out: 2.0:1 Max. - **Measured 1.93:1**
- Isolation: 55 dB Min. - **Measured 73.7 dB**
- Switching Speed: 15 ns Max.
- Video Transients: 15 mV PP
- Video Transients Spectral Content: 65 dBm
- DC Voltage:
  - +5 VDC @ 200 mA Typ. - **Measured 97 mA**
  - -12 VDC @ 60 mA Typ. - **Measured 6 mA**

#### PMI Website Link,

<https://www.pmi-rf.com/product-details/p6t-2g18g-55-r-512-sff>

## 6.0 PMI Model No. LM-400M2G-20-1W-SFF, 0.4 to 2.0 GHz Limiter



PMI Model No. LM-400M2G-20-1W-SFF is a 0.4 to 2.0 GHz Limiter. It has a maximum insertion loss of 0.7 dB and a maximum VSWR of 2.0:1. This limiter is outfitted with SMA female connectors in a housing that measures 0.650" x 0.532" x 0.220".



- Frequency Range: 0.4 to 2.0 GHz
- Insertion Loss: 0.7 dB Max. - Measured 0.69 dB
- Leakage Power: 100 mW Max. - Measured 30.9 mW
- Spike Leakage: 0.1 erg. Max. - Measured 0.004 erg.
- Recovery Time: 250 ns Max. - Measured <20 ns
- VSWR: 2.0:1 Max. - Measured 1.59:1
- RF Power Handling:
  - 1 W CW Max.
  - 3 W Peak Max. (1 us Pulse Width, 0.1% Duty Cycle)

#### PMI Website Link,

<https://www.pmi-rf.com/product-details/lm-400m2g-20-1w-sff>

## 7.0 PMI Model No. PS-360-3237-8-292FF, 32.0 to 37.0 GHz, 8-Bit Digitally Controlled Phase Shifter

PMI Model No. PS-360-3237-8-292FF is a 8-Bit Digitally Controlled, Phase Shifter operating over the frequency range of 32.0 to 37.0 GHz. It has a typical insertion loss of 13.0 dB and a maximum VSWR of 2.3:1 in/3.0:1 out. This model is supplied with 2.92 female connectors and a 15-Pin Micro-D female connector in a housing measuring 1.15" x 1.64" x 0.40".



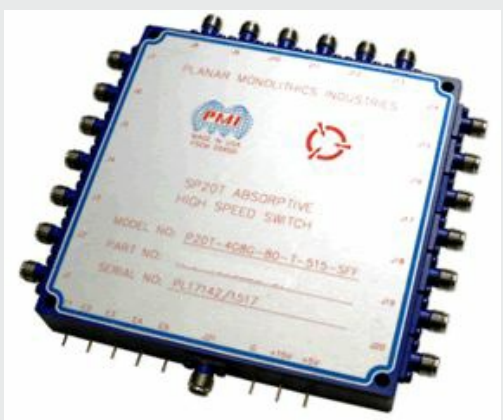
- Frequency Range: 32.0 to 37.0 GHz
- Insertion Loss: 13 dB Typ.
- VSWR Input: 2.0:1 Typ., 2.3:1 Max. - Measured 1.88:1
- VSWR Output: 2.5:1 Typ., 3.0:1 Max. - Measured 1.69:1
- LSB: 1.40625°
- Control Bits: 8 Line (TTL Control)
- Max Phase Shift: 358.59375°
- Amplitude Error: ±1.5 dB Typ.
- Phase Shift Error: ±5.0° Typ. - Measured ±1.3°
- Switching Speed: 500 ns Max. - Measured 450 ns
- Power Supply:
  - +15 V @ 90 mA Max. - Measured 20 mA
  - -15 V @ 60 mA Max. - Measured 10 mA

#### PMI Website Link,

<https://www.pmi-rf.com/product-details/ps-360-3237-8-292ff->

## 8.0 PMI Model No. P20T-4G8G-80-T-515-SFF, 4.0 to 8.0 GHz, SP20T Absorptive Switch

PMI Model No. P20T-4G8G-80-T-515-SFF is a Single Pole, Twenty Throw, Absorptive Switch that operates over the frequency range of 4.0 to 8.0 GHz. It has a maximum insertion loss of 4.0 dB, a minimum isolation of 80 dB, and a maximum VSWR of 2.0:1. This unit is outfitted with SMA female connectors in a housing that measures 4.00" x 4.00" x 0.63".



- Frequency Range: 4.0 to 8.0 GHz
- Isolation: 80 dB Min. - **Measured 88.3 dB**
- Insertion Loss: 4.0 dB Max. - **Measured 3.95 dB**
- VSWR In/Out: 2.0:1 Max., 1.8:1 Typ. - **Measured 1.8:1**
- Input Power (Operating): 100 mW Max. CW (Hot Switchable)
- RF Switching Speed:
  - 2 us Max. (50% TTL to 90% RF) - **Measured <100 ns**
  - 2 us Max. (10% RF to 90% RF) - **Measured <14 ns**
- DC Voltage:
  - +5 VDC (±5%) @ 300 mA Max. - **Measured 144 mA**
  - +15 VDC (±2%) @ 200 mA Max. - **Measured 160 mA**

#### PMI Website Link,

<https://www.pmi-rf.com/product-details/p20t-4g8g-80-t-515-sff>

## 9.0 PMI Model No. SDLVA-0120-70-CONDOR, 0.75 to 1.25 GHz SDLVA

PMI Model No. SDLVA-0120-70-CONDOR is a 0.75 to 1.25 GHz Successive Detection Log Video Amplifier (SDLVA). It has a typical dynamic range of 75 dB and a maximum log linearity of ±2.5 dB @ 1.0 GHz. This model is supplied with SMA female connectors in a housing measuring 3.75" x 1.50" x 0.50".



- Frequency Range: 0.75 to 1.25 GHz
- Dynamic Range: 70 dBm Min., 75 dB Typ.
- Log Linearity: ±2.5 dB Max. @ 1.0 GHz - **Measured +0.46 dB, -0.40 dB**
- Minimum Logging Range: -60 dBm Min., -65 dBm Typ.
- Maximum Logging Range: +5 dBm Min., +8 dBm Typ.
- VSWR In/Out: 1.8:1 Max./2.5:1 Max. - **Measured 1.70:1/1.25:1**
- Tangential Sensitivity: -65 dBm Min., -70 dBm Typ. - **Measured -71.5 dBm**
- Limited IF Output: -6 dBm Nominal, ±2.5 dB Max. - **Measured -4 dBm**
- Maximum RF Input Power: +10 dBm
- Log Video Output:
  - Output Coupling: DC
  - Maximum Output Voltage: 2.7 V - **Measured 2.0 V**
  - Rise Time: 25 ns Max. - **Measured 19.3 ns**
  - Fall Time: 30 ns Max. - **Measured 22.2 ns**
  - Settling Time: 40 ns Max. - **Measured 8 ns**
  - DC Offset: 0.1 V Nominal (Adjustable)
  - Slope: 25 mV/dB Nominal, ±5 mV/dB
  - Log Slope Variation with Frequency: ±0.5 mV/dB Typ. (Over 80 MHz RF Bandwidth)
  - Log Slope Variation with Temperature: ±1 mV/dB Typ.
  - Propagation Delay: 7 ns Typ., 10 ns Max.
  - Video Load: 100 Ohms ± 10%
- DC Power Supply:
  - +10 to +16.5 V @ 200 mA Max. - **Measured 126.1 mA**
  - -10 to -16.5 V @ 200 mA Max. - **Measured 113.2 mA**

## 10.0 PMI Model No. P1T-500M18G-85-T-SFF, 0.5 to 18.0 GHz SPST Absorptive Switch

PMI Model No. P1T-500M18G-85-T-SFF is a Single Pole, Single Throw, Absorptive Switch operating over the frequency range of 0.5 to 18.0 GHz. It has a minimum isolation of 85 dB, a maximum insertion loss of 5.0 dB, and a typical VSWR of 2.5:1. This unit is outfitted with SMA female connectors in a housing that measures 1.0" x 1.0" x 0.5".



- Frequency Range: 0.5 to 18.0 GHz
- Isolation: 85 dB Min. - **Measured 92.59 dB**
- Insertion Loss: 5 dB Typ. - **Measured 3.4 dB**
- VSWR In/Out: 2.5:1 Typ. - **Measured 2.33:1**
- Input Power: +20 dBm CW Max.
- RF Switching Speed (10% to 90% RF): 25 ns Typ.
- DC Voltage:
  - +5 VDC @ 20 mA Typ. - **Measured 20 mA**
  - -5 VDC @ 70 mA Typ. - **Measured 63 mA**
- Control Signal:
  - "0" = Insertion Loss
  - "1" = Isolation

### PMI Website Link,

<https://www.pmi-rf.com/product-details/p1t-500m18g-85-t-sff>

## 11.0 PMI Model No. FD-0518-10-48-OPT3R5G5R5G, 3.5 to 5.5 GHz Frequency Discriminator

PMI Model No. FD-0518-10-48-OPT3R5G5R5G is a Frequency Discriminator operating over the frequency range of 3.5 to 5.5 GHz. It has a nominal operating input power of +10 dBm  $\pm$  0.1 dBm and a video output rise time of 20 ns. This unit is outfitted with SMA female connectors in a housing that measures 2.0" x 1.8" x 0.5".



- Frequency Range: 3.5 to 5.5 GHz
- Input VSWR: 2.0:1 Max., 1.5:1 Typ. - **Measured 1.36:1**
- Operating Input Power: +10 dBm Nominal,  $\pm$ 0.1 dBm
- Video Impedance: 100 Ohms Nominal
- Video Output Rise Time: 20 ns - **Measured 14.8 ns**
- Video Output Slope: 1 V/GHz Typ. - **Measured 0.894 V/GHz**
- Frequency Discriminator Accuracy:  $\pm$ 200 MHz - **Measured 167.95 MHz**
- RF Input Power, Survival: +15 dBm
- DC Supply:
  - +12 to +15 VDC @ +75 mA - **Measured +36 mA**
  - -12 to -15 VDC @ -75 mA - **Measured -0.008 mA**

### PMI Website Link,

<https://www.pmi-rf.com/product-details/fd-0518-10-48-opt3r5g5r5g>



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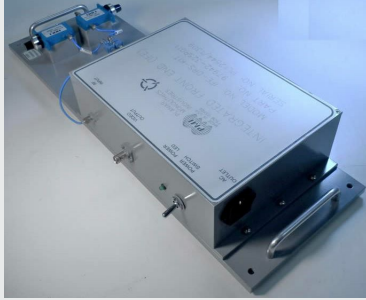
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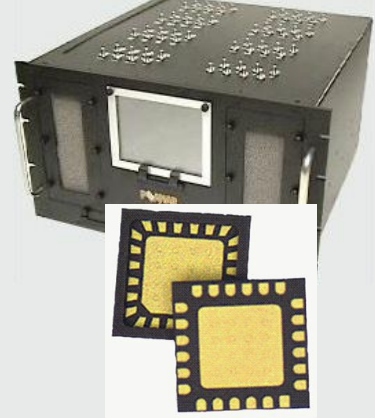
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