Planar Monolithics Industries, Inc.

7.0 to 18.0 GHz, 75dB, Extended Range Detector Log Video Amplifier

TECHNICAL DATASHEET

PMI Model No. GMDA-D1003 is a Detector Log Video Amplifier (DLVA) that operates between the 7.0 to 18.0GHz frequency range. It has a dynamic range of 75dB, a log slope of 25mV/dB and a nominal video bandwidth of 12MHz. Furthermore, it has been designed using cutting edge GaAs technology which provides stunning performance and reliability in a compact package.

Features
- 7.0 to 18.0 GHz
- -70 to +5 dBm Logging Range
- 2.5:1 VSWR
- -75dB TSS
- VSWR 2.5:1 Max.
- 1us Recovery Time Max..

Applications
- EW Systems
- Radars
- UAVs & UGVs
- Communications
- Test Equipment
- Laboratories

Electrical Specifications

- Frequency Range: 7.0 to 18.0GHz
- Logging Range: -70dBm to +5dBm
- TSS: 75dBm max
- Logging Slope: +25.0±1.0mV/dB typ
- Logging Linearity: +1.0dB max @ +25°C
- +1.2dB max @ -25°C & +85°C
- Flatness: 100mV max
- RF Safe Input Power: +23dBm min
- Max Output Voltage: +2.5V max
- Input VSWR(50 Ohms): 2.5:1
- RF Input Impedance: 50 Ohms nom
- Video Load Impedance: 75 Ohms nom
- Video Rise Time: 30nS max
- Recovery Time: 1μS max
- Throughput Time: 30nS max
- Video Bandwidth: 10MHz min
- Offset Voltage: 50mV max
- DC Power Supply: +12VDC±5% @ 300mA max
- -12VDC±5% @ 150mA max
- Size: 2.9” x 3.0” x 0.5”
- Finish: Nickel Plate

Environmental Ratings

- Temperature: -25°C to +85°C Operating
- -30 °C to +85 °C Non-Operating
- Altitude: N/A
- Humidity: 100%RH
- Shock: 15 G 11±1 ms
- Vibration: 10 MM P-P, 2 to 7Hz
  1 G, 7 to 50Hz

ISO9001 REGISTERED

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LOG TRANSFER vs. FreqENCY @ 25C

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RISE TIME
13.21ns @ 25°C

RECOVERY TIME
500ns @ 25°C

TANGENTIAL SIGNAL SENSITIVITY (TSS)
-76dBm @ 18.0 GHz