

DESCRIPTION

THE MODEL SDLVA-07103-70 OPTION LA3 IS A SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA) THAT OPERATES OVER THE 750 MHz TO 1.25 GHz FREQUENCY RANGE. THIS SDLVA OFFERS 70 dB HIGH DYNAMIC RANGE (MINIMUM) AND A NOMINAL 20 MHz VIDEO BANDWIDTH. LOG LINEARITY IS ± 1.5 dB FROM THE BEST FIT STRAIGHT LINE OVER THE DYNAMIC RANGE OF -65 TO +5 dBm.

SPECIFICATIONS

- FREQUENCY RANGE: ----- 750 TO 1,250 MHz MIN
- DYNAMIC RANGE: ----- 70 dB MIN
- LOG LINEARITY: ----- ± 1.5 dB MAX. (-65 TO +5 dBm)
- MINIMUM LOGGING LEVEL: ----- -65 dBm MAX
- MAXIMUM LOGGING LEVEL: ----- +5 dBm MIN
- VSWR INPUT AND OUTPUT: ----- 2.0:1 MAX
- MINIMUM TANGENTIAL SENSITIVITY: ----- -70 dBm MAX
- LIMITED IF OUTPUT: ----- 8.5 dBm MIN (-65 TO -60 dBm)
9.5 TO 12.5 dBm (-60 TO +5 dBm)
- UNIT TO UNIT PHASE TRACKING: ----- 2.5° OVER 50 MHz
- AM/PM: ----- 1.2°/dB MAX (-65 TO -55 dBm)
0.75°/dB MAX (-55 TO 0 dBm)
2.0°/dB MAX (0 TO +5 dBm)
- LOG VIDEO OUTPUT
 - OUTPUT COUPLING: ----- DC
 - MAXIMUM OUTPUT VOLTAGE: ----- 2.7 VOLTS
 - RISE TIME: ----- 25 ns MAX (20 ns TYPICAL)
 - FALL TIME: ----- 30 ns MAX
 - SETTLING TIME: ----- 40 ns MAX (10% INPUT PULSE TO WITHIN 0.5 dB)
 - RECOVERY TIME: ----- 50 ns MAX (90% INPUT PULSE TO WITHIN 0.5 dB)
 - DC OFFSET: ----- 0.2 V
 - SLOPE: ----- 30 mV/dB $\pm 5\%$
 - LOG SLOPE VARIATION WITH FREQUENCY: ----- ± 0.5 mV/dB (OVER 100 MHz RF BANDWIDTH)
 - LOG SLOPE VARIATION WITH TEMPERATURE: ----- ± 1.5 mV/dB MAX
 - PROPAGATION DELAY: ----- 10 ns MAX, 7 ns TYP
 - VIDEO LOAD: ----- 100 Ω MIN
- DC POWER: ----- +5 V @ 250 mA MAX
-5.2 V @ 150 mA MAX
- FINISH: ----- PAINTED BLUE
- SIZE: ----- 1.30" x 0.95" x 0.27"
- WEIGHT: ----- 2.75 OZ

ENVIRONMENTAL RATINGS

- TEMPERATURE: ----- -55 °C TO +85 °C (OPERATING)
-65 °C TO +125 °C (STORAGE)
- HUMIDITY: ----- MIL-STD-202, METHOD 103B COND. B
- SHOCK: ----- MIL-STD-202, METHOD 213B COND. B
- VIBRATION: ----- MIL-STD-202, METHOD 204D COND. B
- ALTITUDE: ----- MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE: ----- MIL-STD-202, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

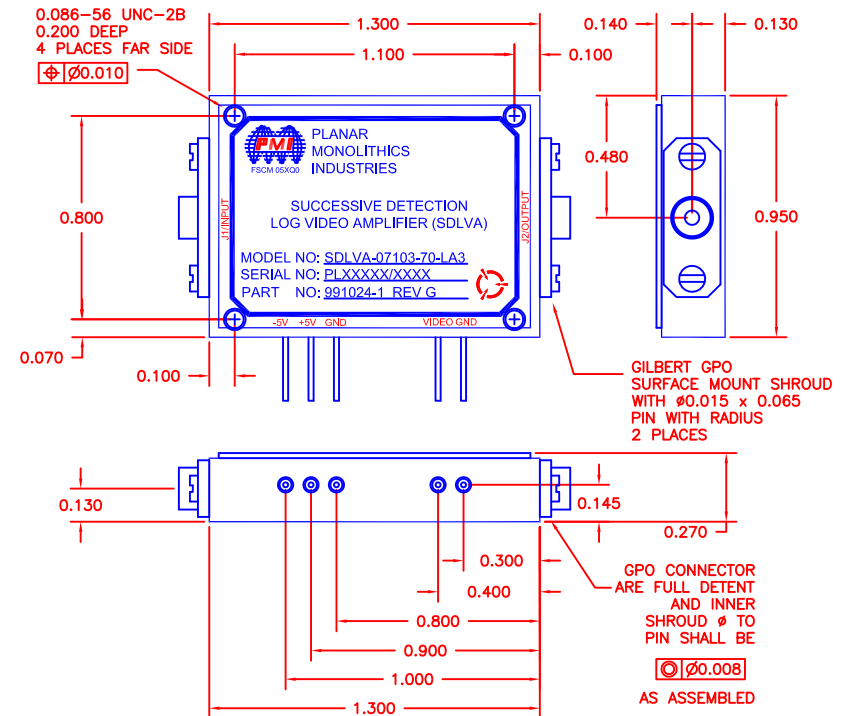
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

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ALL DIMENSIONS
ARE IN INCHES [mm]
TOLERANCES:
X.XX ± 0.020
X.XXX ± 0.010

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	07/21/17	

MECHANICAL OUTLINE



PLANAR MONOLITHICS INDUSTRIES, INC.
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ISO 9001 CERTIFIED

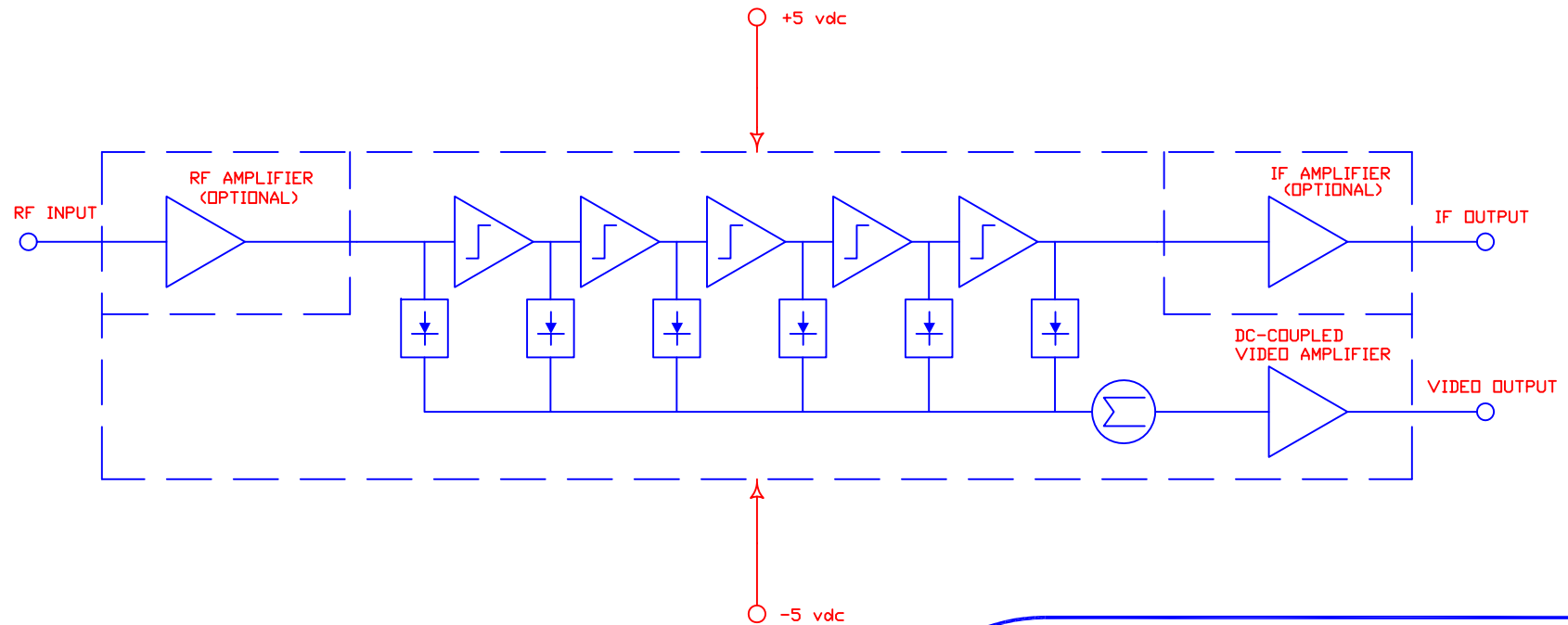


APPROVALS		DATE	TITLE			
DRAWN <i>FR & WP</i>		04/11/00	PRODUCT FEATURE SDLVA-07103-70-LA3			
REDRAWN <i>SPU</i>		07/21/17	SIZE A	FSCM NO. 05XQ0	DWG NO. 27033000	REV. A1
ISSUED			SCALE N:S	SHEET 1 OF 2		

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FUNCTIONAL SCHEMATIC



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