

**DESCRIPTION:**

THE SDLVA-2020 SERIES OF TRULY DC-COUPLED SUCCESSIVE DETECTION LOG VIDEO AMPLIFIERS (SDLVA'S) ARE AVAILABLE IN EXTENDED 70/75 dB DYNAMIC RANGE OVER THE RANGE OF 0.5-18 GHz BANDWIDTH, WITH TRUE DC COUPLING. UNITS EMPLOY PLANAR DIODE DETECTORS AND INTEGRATED VIDEO CIRCUITRY FOR HIGH SPEED PERFORMANCE AND OUTSTANDING RELIABILITY. THE DLVA'S ARE OF SUPERIOR CONSTRUCTION USING STATE-OF-THE-ART MIC/MMIC TECHNOLOGY. THE SIZE IS 3.00" X 3.50" X 0.50".

**FEATURES**

- TRULY DC COUPLED
- WIDE BANDWIDTHS
- FAST RISE TIMES
- SHORT RECOVERY TIMES
- SUPERIOR ACCURACY
- EXTENDED DYNAMIC RANGE CAPABILITY
- MINIATURE SIZE
- 7.2 OZ WEIGHT

**SPECIFICATIONS:**

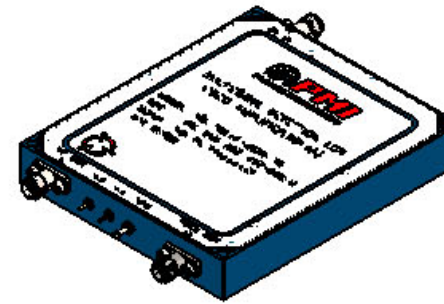
- FREQUENCY RANGE:..... 2.0-18 GHz
- FREQUENCY FLATNESS:..... ±2.0 dB MAXIMUM
- TSS:..... -65 dBm MAXIMUM
- VSWR:..... 3.0:1 MAXIMUM (@ -20 dBm)
- LOGGING RANGE:..... -65 dBm TO +5 dBm
- LOG LINEARITY:..... ±1.75 dB MAXIMUM (-65 dBm TO +5 dBm)
- LOG SLOPE:..... 20 mV/dB (±10% TOLERANCE)
- LOG TEMPERATURE STABILITY:..... ±1.75 dB MAXIMUM (0°C TO 60°C)
- RISE TIME (10% TO 90% POINTS):..... 20 ns TYPICAL, 25 ns MAXIMUM
- RECOVERY TIME:..... 500 ns TYPICAL, 600 ns MAXIMUM (-65 dBm TO +5 dBm)
- OUTPUT POWER..... +10 dBm ±2.5 dB TYPICAL
- OUTPUT VIDEO LOAD:..... 50 OHMS ±10%
- DC POWER (NO LOAD):
  - +V..... 15 V @ 600 mA MAXIMUM
  - V..... 15 V @ 200 mA MAXIMUM
- SIZE:..... 3.00" X 3.50" X 0.50"
- FINISH:..... PAINTED BLUE

**OPTIONS:**

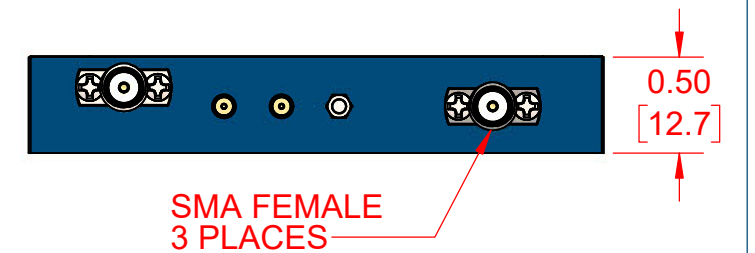
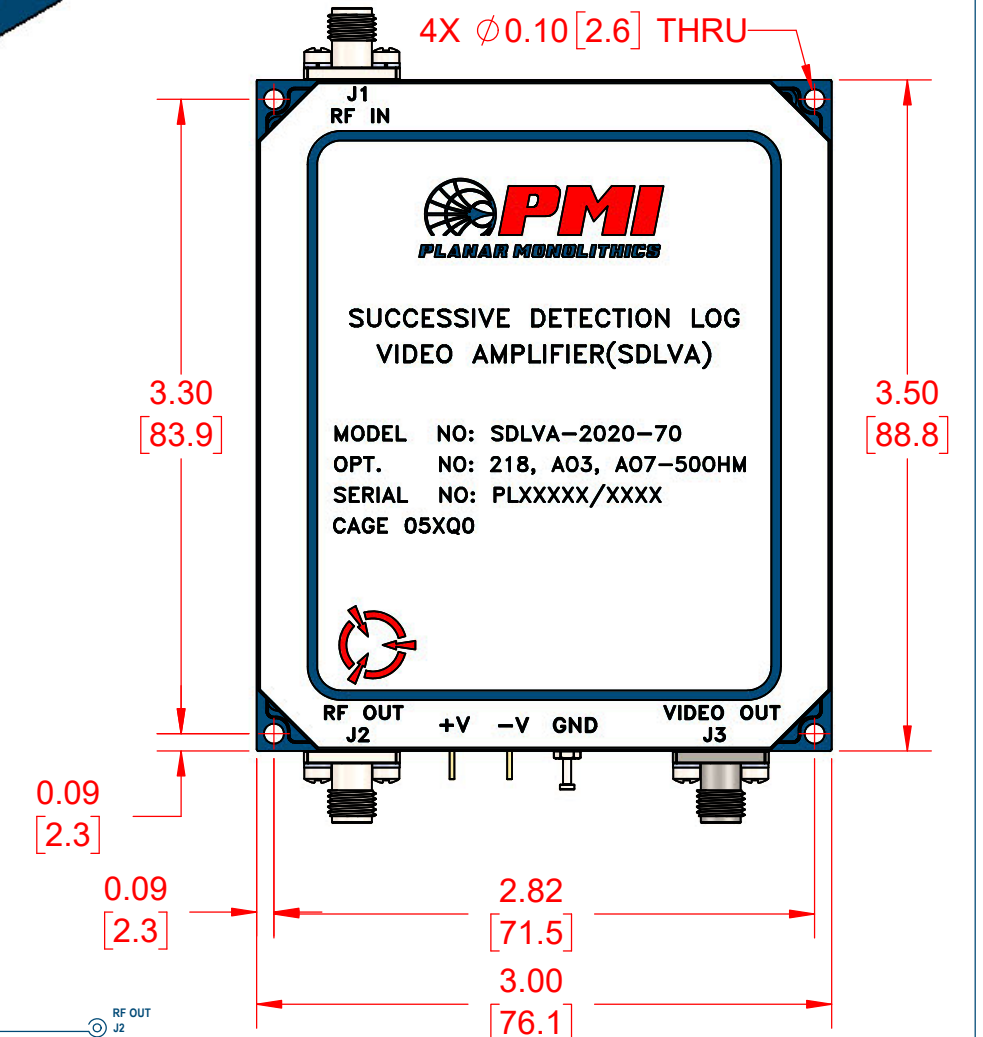
- 0518..... FREQUENCY 0.5 TO 18 GHz RANGE
- 218..... FREQUENCY 2 TO 18 GHz RANGE
- A03..... FASTER RISE/RECOVERY TIMES
- A07..... OTHER VIDEO LOAD

**ENVIRONMENTAL RATINGS:**

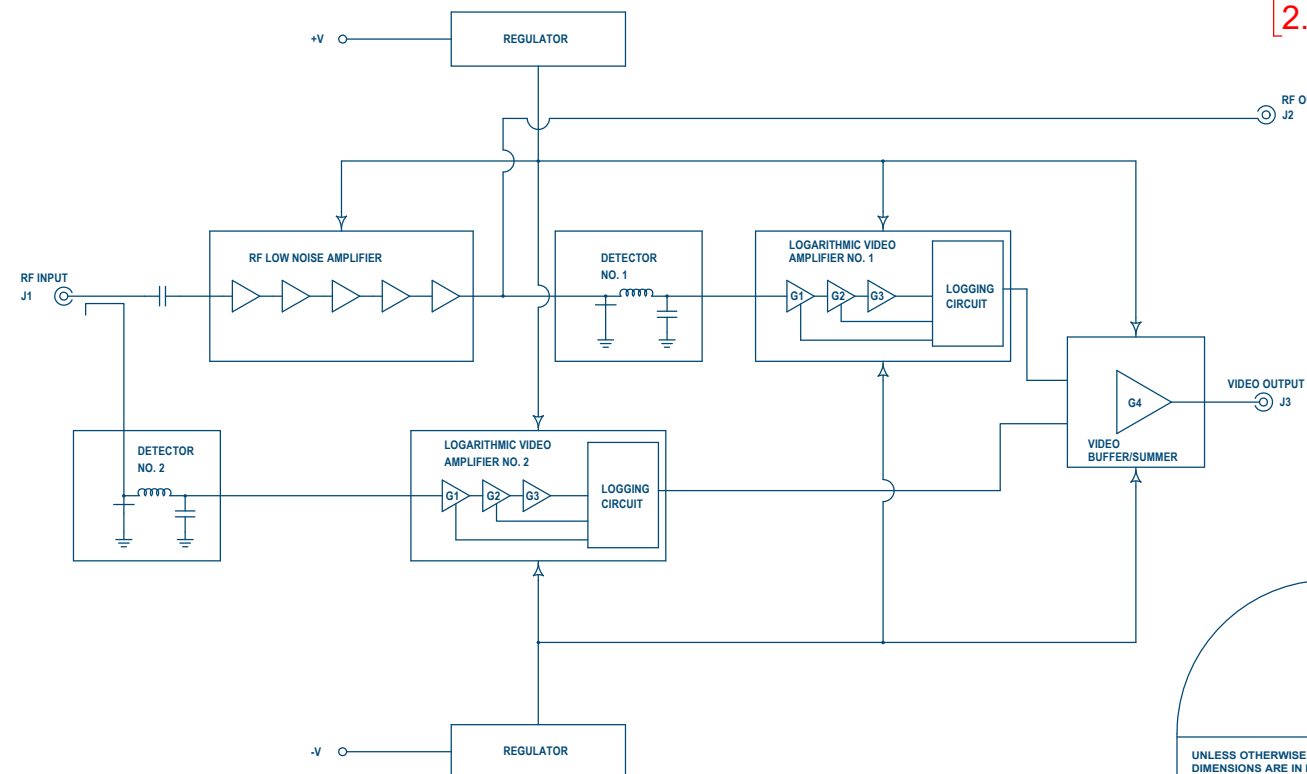
- TEMPERATURE:..... -54°C TO +85°C (OPERATING)  
-65°C TO +100°C (STORAGE)
- HUMIDITY:..... MIL-STD-202F, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202F, METHOD 213B COND. B
- VIBRATION:..... MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE:..... MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202F, METHOD 107D COND. A



ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	10/13/2022	
	B1	ECN # 26-0009	1/13/2026	
	C1	ECN # 26-0057	3/11/2026	



**FUNCTIONAL BLOCK DIAGRAM**



NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE  
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS		DATE	 <small>7309-A GROVE ROAD FREDERICK, MARYLAND 21704 USA TEL: (301) 662-5019, FAX: (301) 662-1731 WEB: WWW.QUANTICPMI.COM, EMAIL: SALES@QUANTICPMI.COM ISO 9001 CERTIFIED</small>		
DRAWN J ESCANO		10/13/2022	TITLE OUTLINE		
REISSUED			SDLVA-2020-70-OPT218-A03-A07-50OHM		
SIZE B	FSCM NO. 05XQ0	DWG NO. 27044140	REV. C1		
SCALE 1:1			SHEET 1 OF 1		

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
FRACTIONS DECIMALS ANGLES  
± .XX ± 0.02 ±  
± .XXX ± 0.01