

DESCRIPTION

THE MODEL SDLVA-0120-70-CONDOR IS A SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA) THAT OPERATES BETWEEN THE 750 TO 1250 MHz FREQUENCY RANGE. IT HAS A DYNAMIC RANGE OF 70 dB MINIMUM AND A TSS OF -65 dBm. FURTHERMORE, IT HAS BEEN DESIGNED TO PROVIDE STUNNING PERFORMANCE AND RELIABILITY IN A COMPACT PACKAGE MAKING IT AN OPTIMUM SOLUTION FOR HIGH SPEED CHANNELIZED RECEIVER APPLICATIONS. THIS UNIT OFFERS A MAXIMUM FAST RISE TIME OF ≤ 25 nsec AND A RAPID FALL TIME OF ≤ 30 nsec

SPECIFICATIONS

- FREQUENCY RANGE: 750 MHz TO 1250 MHz
- DYNAMIC RANGE: 70 dBm MINIMUM, 75 dB TYPICAL
- LOG LINEARITY: ± 2.5 dB MAXIMUM @ 1 GHz
- MINIMUM LOGGING RANGE: -60 dBm Min, -65 dBm Typ
- MAXIMUM LOGGING RANGE: +5 dBm Min, +8 dBm Typ
- VSWR INPUT: Input: 1.8:1 Max, Output: 2.5:1 Max
- TANGENTIAL SENSITIVITY: -65 dBm Min, -70 dBm Typ
- LIMITED IF OUTPUT: -6 dBm Nominal, ± 2.5 dB Max
- MAXIMUM RF INPUT POWER: +10 dBm
- LOG VIDEO OUTPUT:
 - OUTPUT COUPLING: DC
 - MAXIMUM OUTPUT VOLTAGE: 2.7 VOLTS
 - RISE TIME: 25 nsec Max
 - FALL TIME: 30 nsec Max
 - SETTLING TIME: 40 nsec Max
 - DC OFFSET: 0.1 V NOMINAL (ADJUSTABLE)
 - SLOPE: 25 mV/dB Nominal, ± 5 mV/dB
 - LOG SLOPE VARIATION WITH FREQUENCY: ± 0.5 mV/dB TYPICAL (OVER 80 MHz RF BANDWIDTH)
 - LOG SLOPE VARIATION WITH TEMPERATURE: ± 1 mV/dB TYPICAL
 - PROPAGATION DELAY: 7 nsec Typ, 10 nsec Max
 - VIDEO LOAD: 100 Ω $\pm 10\%$
- DC POWER SUPPLY:
 - +V: +10 TO +16.5V @ 200 mA MAX*
 - V: -10 TO -16.5V @ 200 mA MAX
 - *NOTE: DO NOT SUPPLY +V WITHOUT -V SUPPLIED AS WELL AS THIS MAY DESTROY THE UNIT
- SIZE: 3.75" x 1.50" x 0.50"
- FINISH: MOUNTING SURFACE (BOTTOM) FREE OF PAINT
GRAY EPOXY POLIMIDE COATING IAW MIL-C-22750, TYPE I OVER EPOXY POLIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

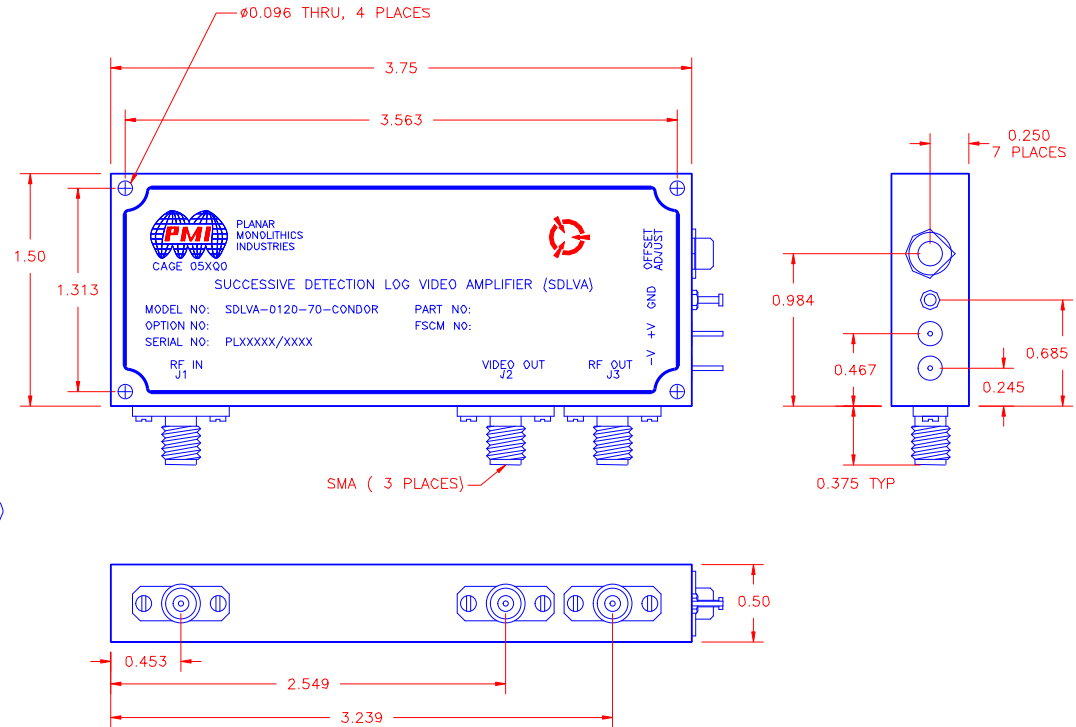
ENVIRONMENTAL RATINGS

- TEMPERATURE: -55°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

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

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX ± 0.020
X.XXX ± 0.010
WEIGHT: 2.75 oz.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	01/31/14	



PMI CONFIDENTIAL AND PROPRIETARY

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ISO 9001 CERTIFIED



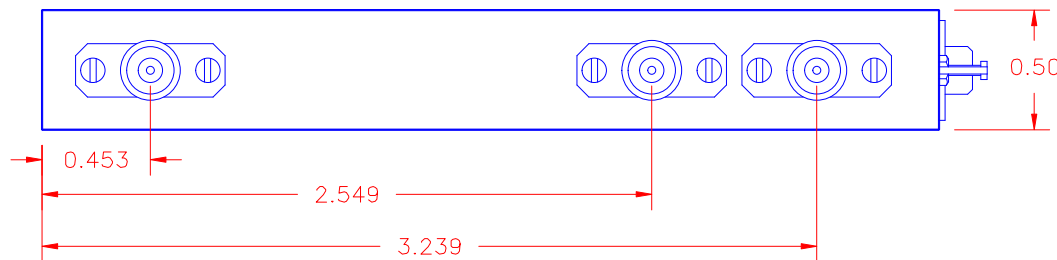
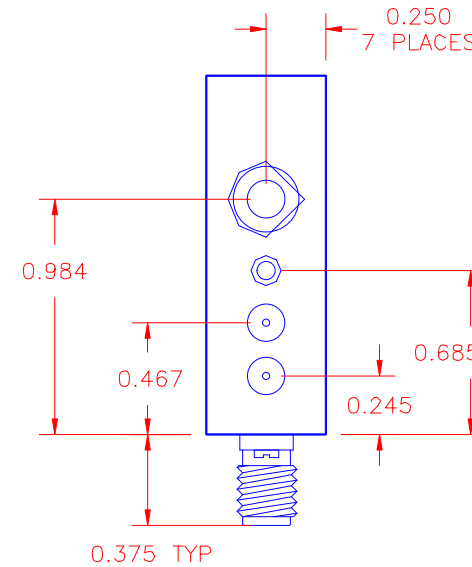
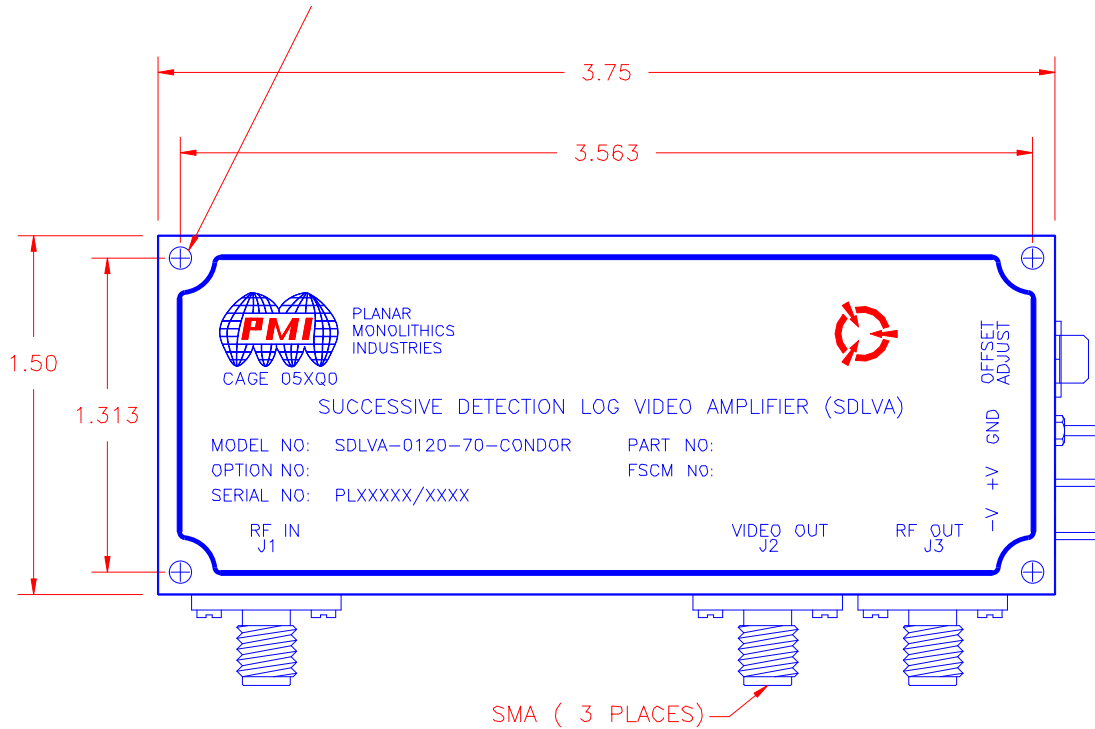
APPROVALS		DATE	TITLE			REV.
DRAWN <i>sfb</i>		01/31/14	PRODUCT FEATURE SDLVA-0120-70-CONDOR			A1
CHECKED			SIZE	FSCM NO.	DWG NO.	
ISSUED			A	05XQ0	27008411	
			SCALE	N:S	SHEET	1 OF 3

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MECHANICAL OUTLINE



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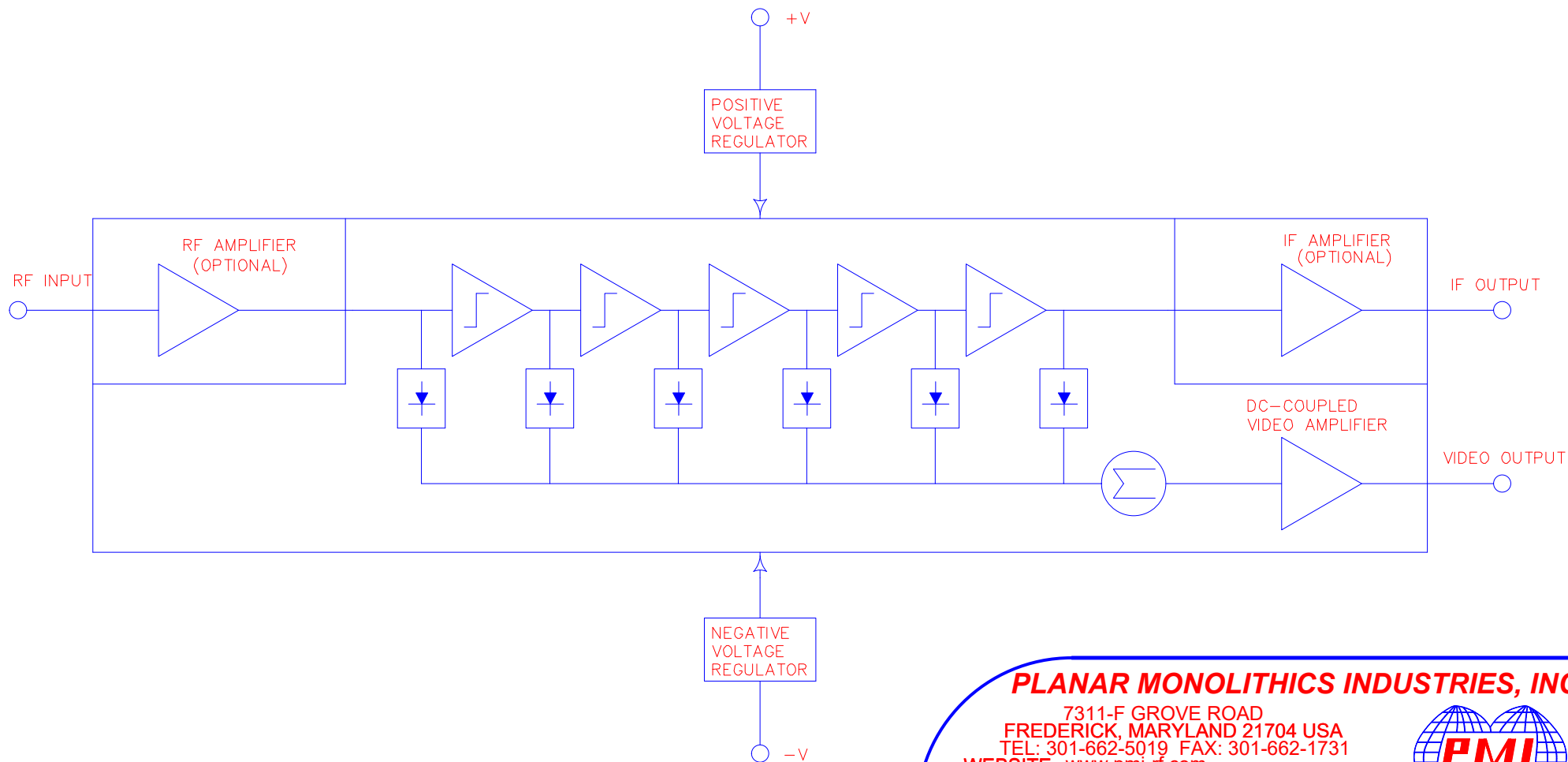
APPROVALS		DATE	TITLE			
DRAWN <i>sfk</i>		01/31/14	PRODUCT FEATURE SDLVA-0120-70-CONDOR			
CHECKED			750 TO 1250 MHz, SUCCESSIVE DETECTOR LOG VIDEO AMPLIFIER			
ISSUED			SIZE A	FSCM NO. 05XQ0	DWG NO. 27008411	REV. A1
			SCALE N:S			SHEET 2 OF 3

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FUNCTIONAL BLOCK DIAGRAM



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CHECKED			750 TO 1250 MHz, SUCCESSIVE DETECTOR LOG VIDEO AMPLIFIER	SIZE FSCM NO.	DWG NO.
ISSUED			A 05XQ0	27008411	REV. A1
SCALE N:S			SHEET 3 OF 3		