

DESCRIPTION

THE MODEL SDLVA-0120-70 OPTION 105F SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA) OPERATES OVER THE 1.4 TO 1.6 GHz RANGE THESE UNITS HAVE A DYNAMIC RANGE OF 65 TO 70 dB, A TSS OF -67 dBm AND A NOMINAL VIDEO BANDWIDTH OF 20 MHz. FURTHERMORE, THESE UNITS ARE DESIGNED USING CUTTING EDGE GaAs TECHNOLOGY WHICH PROVIDES STUNNING PERFORMANCE AND RELIABILITY IN A COMPACT PACKAGE MAKING IT AN OPTIMUM SOLUTION FOR HIGH SPEED CHANNELIZED RECEIVER APPLICATIONS. THESE UNITS OFFER TYPICAL FAST RISE TIME ≤ 20 ns, RAPID FALL TIME ≤ 25 ns AS WELL AS SUPERIOR DELAY TIME OF 8 nsec.

THE LOG SLOPE IS 25mV/dB AND THE ACCURACY IS LESS THAN ± 1.0 dB OVER THE -60 TO 0 dBm POWER INPUT RANGE. DYNAMIC RANGE CAN BE EXTENDED TO -65/+5 WITH LOG ERROR OF ± 1.5 dB. OPTIONS ARE AVAILABLE WITH ADJUSTABLE LOGGING SLOPE AND DC OFFSETS.

GUARANTEED RISE TIMES ARE LESS THAN 25 ns AND MAXIMUM RECOVERY TIMES ARE LESS THAN 30 ns. RECOVERY TIMES AT LOWER POWER ARE FASTER.

THE SDLVA-0120-70 SDLVA IS COMMERCIALY SCREENED AND CHARACTERIZED FROM -55°C TO +85°C. SIZES AVAILABLE ARE 3.75" x 1.50" x 0.50" OR TO ANY OTHER CUSTOMIZED CONFIGURATION DESIRED.

SPECIFICATIONS

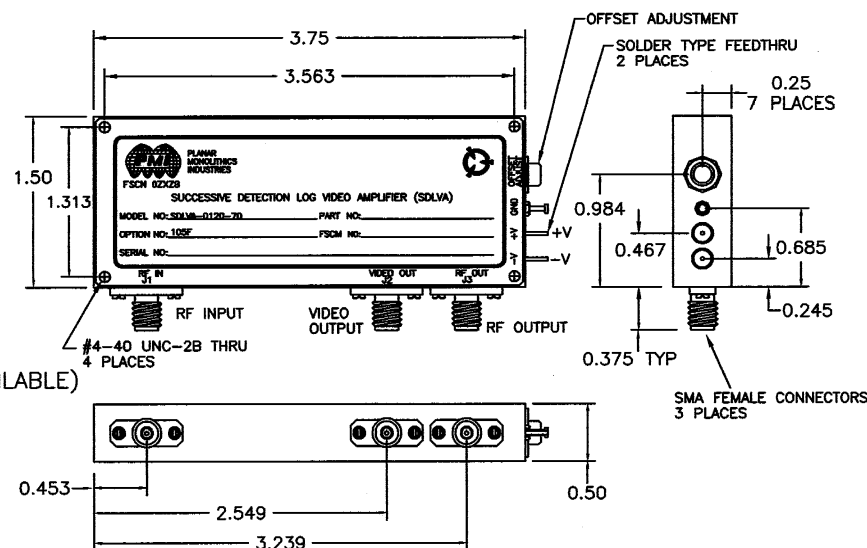
- FREQUENCY RANGE 1.4 TO 1.6 GHz (OTHER FREQUENCY RANGES AVAILABLE)
- DYNAMIC RANGE > 65 dB
- LOG LINEARITY ± 1.2 dB MAX. (-60 dBm TO 0 dBm), ± 0.8 dB TYPICAL
 ± 1.5 dB MAX. (-65 dBm TO +5 dBm), ± 1.2 dB TYPICAL
- MINIMUM LOGGING RANGE -60 dBm (-65 dBm TYPICAL)
- MAXIMUM LOGGING RANGE +5 dBm (+8 dBm TYPICAL)
- VSWR INPUT 1.8:1 MAXIMUM (1.5:1 TYPICAL)
- TANGENTIAL SENSITIVITY -65 dBm MINIMUM (-70 dBm TYPICAL)
- LIMITED IF OUTPUT -16 dBm
- MAXIMUM RF INPUT POWER +10 dBm
- LOG VIDEO OUTPUT:
 - OUTPUT COUPLING DC
 - MAXIMUM OUTPUT VOLTAGE 2.7 VOLTS
 - RISE TIME 25 ns MAXIMUM
 - FALL TIME 30 ns MAXIMUM
 - SETTLING TIME 40 ns MAXIMUM
 - DC OFFSET 0.1 V NOMINAL (ADJUSTABLE)
 - SLOPE 25 mV/dB NOMINAL (ADJUSTABLE TO 30mV/dB)
 - LOG SLOPE VARIATION WITH FREQUENCY ± 0.5 mV/dB (OVER 80 MHz RF BANDWIDTH)
 - LOG SLOPE VARIATION WITH TEMPERATURE ± 1 mV MAXIMUM
 - PROPAGATION DELAY 10 ns MAXIMUM, 7 ns TYPICAL
 - VIDEO LOAD 100 Ω $\pm 10\%$
- DC POWER SUPPLY
 - +V +7 TO +18 VOLTS @ 100mA
(120 mA FOR EXTENDED DYNAMIC RANGE)
 - V -7 TO -18 VOLTS @ 190mA
- SIZE 3.75" x 1.50" x 0.50"

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

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	ORIGINAL JOB # P110027	3/26/02	

MECHANICAL OUTLINE



NOTES:

- DIMENSIONS ARE IN INCHES
- TOLERANCES: X.XX ± 0.020
X.XXX ± 0.010
- WEIGHT: 2.75 OZ

CONFIDENTIAL AND PROPRIETARY

PART NO.		PLANAR MONOLITHICS INDUSTRIES FREDERICK, MARYLAND	
APPROVALS	DATE	TITLE	
DRAWN WSP	3/26/02	PRODUCT FEATURE SDLVA-0120-70 OPTION: 105F	
CHECKED			
ISSUED			
SIZE FSCM NO.		DWG NO.	REV.
A 0ZXZ8		100-6297	-
SCALE N:S		SHEET 1 of 3	