

DESCRIPTION

THE MODEL SLVAC-06135M OPTION MA08 MINIATURE SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA) OPERATES OVER THE 0.6 TO 1.35 GHz FREQUENCY 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 FAST RISE TIME ≤ 25 ns MAXIMUM, RAPID FALL TIME ≤ 30 ns MAXIMUM.

SPECIFICATIONS

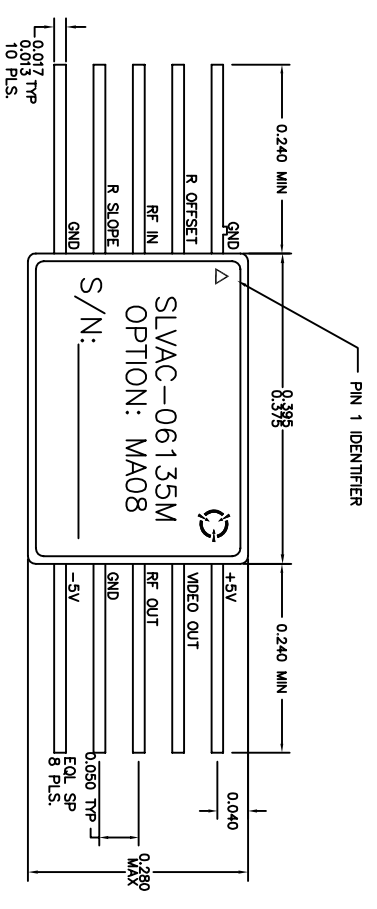
- FREQUENCY RANGE: 0.6 TO 1.35 GHz
- DYNAMIC RANGE: > 65 dB
- LOG LINEARITY: ± 1.2 dB MAX. (-60 dBm TO 0 dBm), ± 0.8 dB TYPICAL
- MINIMUM LOGGING RANGE: -60 dBm (-65 dBm TYPICAL)
- MAXIMUM LOGGING RANGE: +5 dBm (+8 dBm TYPICAL)
- VSWR INPUT: 1.8:1 MAXIMUM (1.5:1 TYPICAL)
- TANGENTIAL SENSITIVITY: -65 dBm MINIMUM (-70 dBm TYPICAL)
- LIMITED IF OUTPUT: -16 dBm (TYP)
- 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
 - SETTILING TIME: 40 ns MAXIMUM
- DC OFFSET: EXTERNALLY ADJUSTABLE
- SLOPE: ADJUSTABLE TO 30mV/DB
- LOG SLOPE VARIATION WITH FREQUENCY: ± 0.5 mV/DB TYPICAL (OVER 80 MHz RF BANDWIDTH)
- LOG SLOPE VARIATION WITH TEMPERATURE: ± 1 mV TYPICAL
- PROPAGATION DELAY: 10 ns MAXIMUM, 7 ns TYPICAL
- VIDEO LOAD: 100 Ω (MINIMUM)
- DC POWER SUPPLY (REGULATED TO 0.1%)
 - +V: +5 VOLTS @30mA (NO VIDEO LOAD)
 - -V: -5 VOLTS @170mA
- SIZE: 0.395" x 0.280" x 0.090"

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

REVISIONS		DATE	APPROVED
ZONE	REV.	DESCRIPTION	
A		ORIGINAL RELEASE	2/9/09



PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
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ISO 9001:2000 CERTIFIED



APPROVALS	DATE	TITLE	SIZE	FRSM NO.	DWG NO.	REV.
gkm	12/8/04	PRODUCT FEATURE SLVAC-06135M OPTION: MA08	A	OZXZ8	27008323	A
CHECKED			SCALE	N:1S	SHEET	1 OF 3
ISSUED						

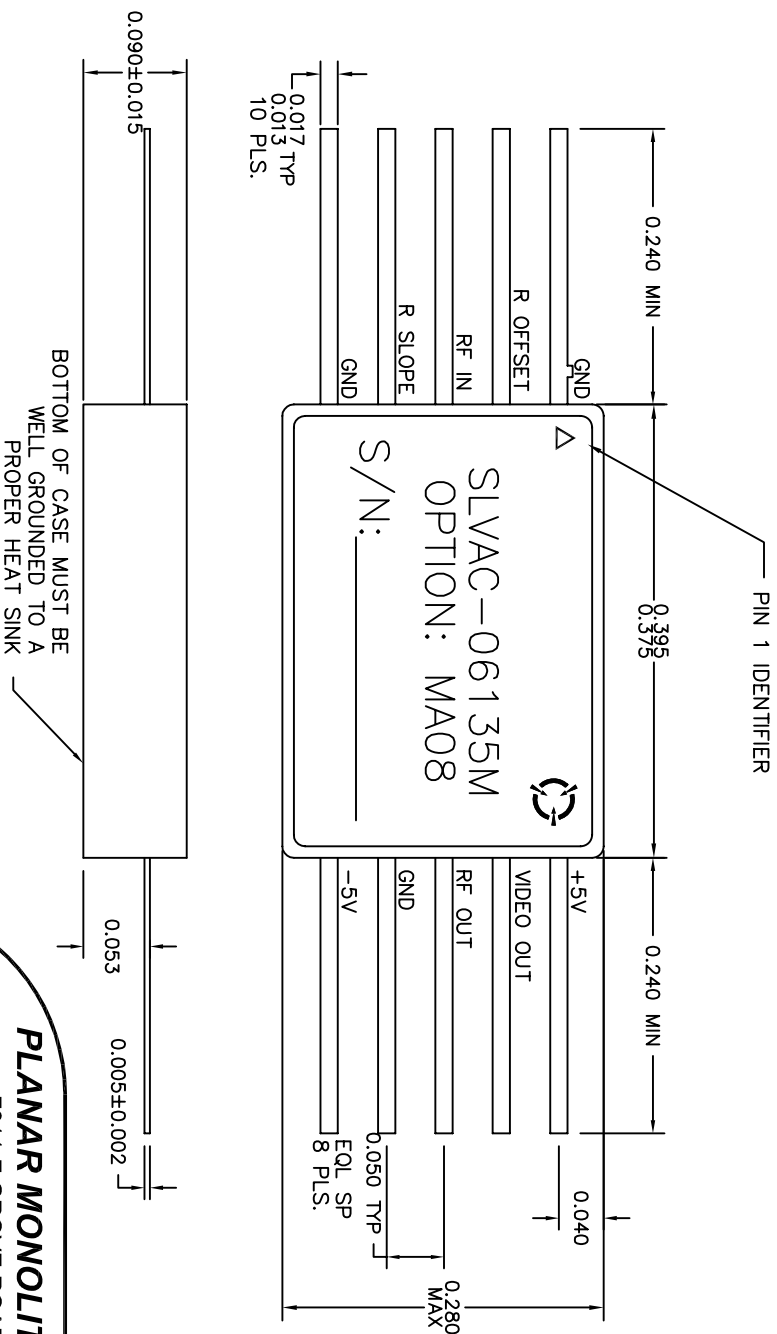
ALL DIMENSIONS ARE IN INCHES
TOLERANCES: F0.020
X.XXX F0.010

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MECHANICAL OUTLINE



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TITLE	APPROVALS	DATE	SIZE	FRSM NO.	DWG NO.	REV.
MECHANICAL OUTLINE SLVAC-06135M OPTION: MA08	<i>JRM</i>	12/8/04	A	05X00	27008323	A
0.6 TO 1.35 GHz DETECTOR LOG VIDEO AMPLIFIER						
SCALE N:S						
SHEET						

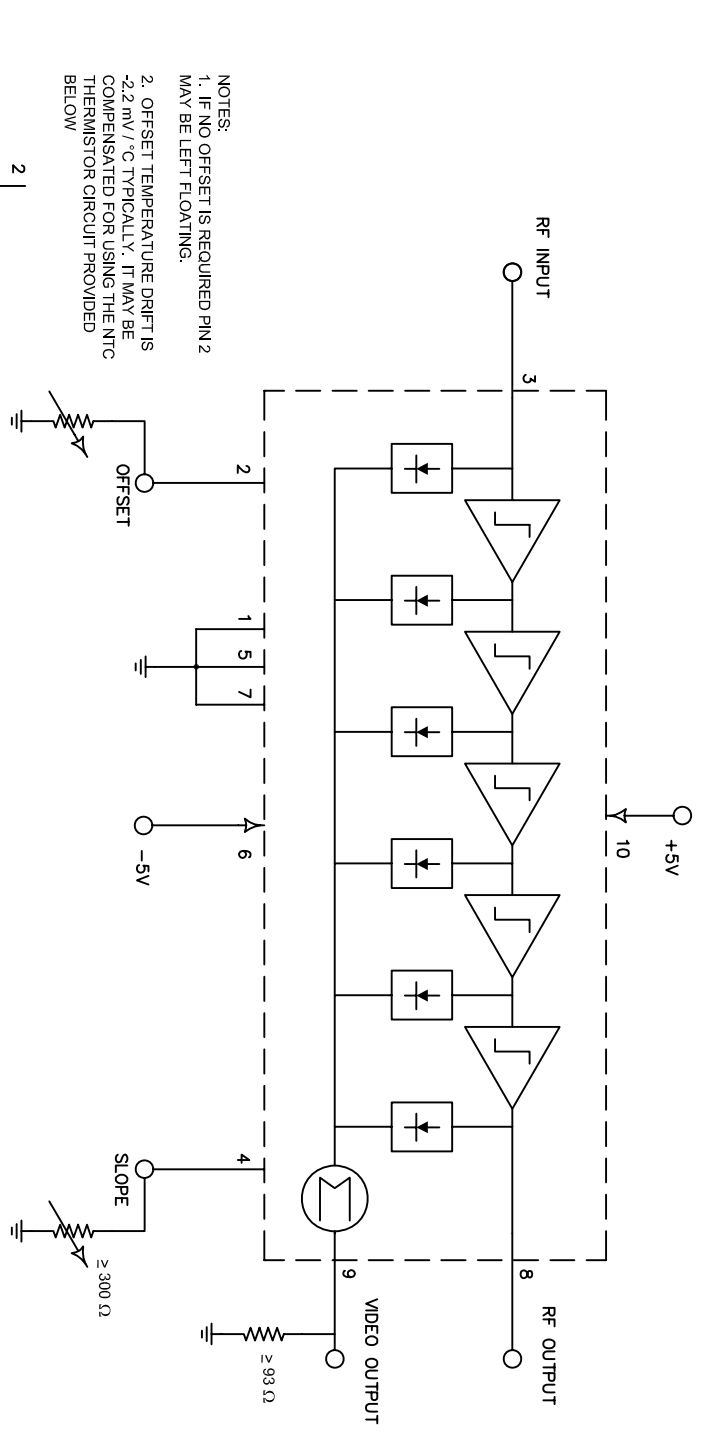
ALL DIMENSIONS ARE IN INCHES
 TOLERANCES: ±0.020
 XXX ±0.010
 XXXX ±0.010

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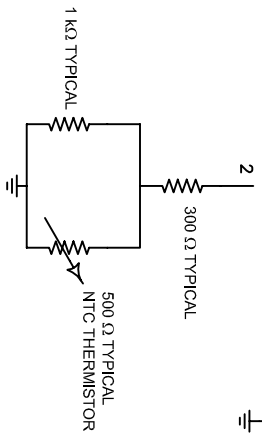
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FUNCTIONAL BLOCK DIAGRAM



- NOTES:
1. IF NO OFFSET IS REQUIRED PIN 2 MAY BE LEFT FLOATING.
 2. OFFSET TEMPERATURE DRIFT IS ≈ 2.2 mV/°C TYPICALLY. IT MAY BE COMPENSATED FOR USING THE NTC THERMISTOR CIRCUIT PROVIDED BELOW



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PMI

TITLE: FUNCTIONAL BLOCK DIAGRAM
 SLVAC-06135M
 OPTION: MA08
 0.6 TO 1.35 GHz DETECTOR LOG VIDEO AMPLIFIER

APPROVALS	DATE	SIZE	FRSM NO.	DWG NO.	REV.
gkm	12/8/04	A	05X00	27008323	A
CHECKED		SCALE	N:S	SHEET	3 OF 3
ISSUED					

CONFIDENTIAL AND PROPRIETARY