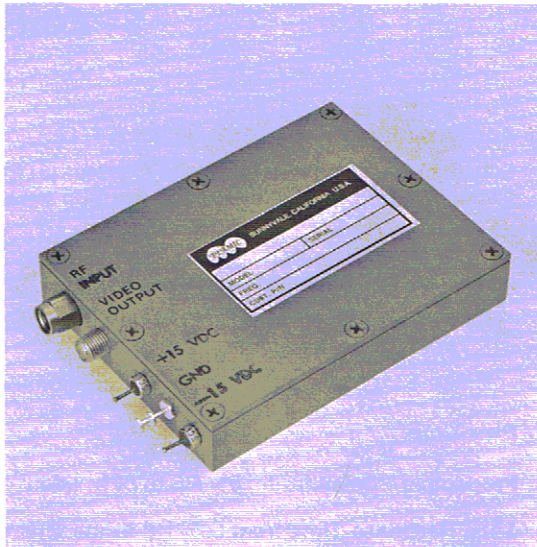




PSEUDO DIRECT COUPLED RF LOG DETECTORS

FEATURES

- Inherent C.W. Immunity up to -27 dBm
- No baseline Shift Errors up to 20 Microsecond Wide Pulses at 25% Duty Cycle
- PRI Capability of 300,000 P.P.S.
- Rugged and Miniaturized
- Low Recovery Time



DESCRIPTION:

PLAMIC's HLA Series of RF Log Detectors are designed using an optimum combination of discrete, integrated and thick film hybrid integrated circuits. These units meet the intent of Mil E-5400 and Mil E-16400. All units go through 96 hours of operating burn-in before final test. In these units, base line is held constant over a wide range of pulse widths and duty cycles by a high gain, stable D.C. feedback

loop. There is inherent C.W. immunity up to -27 dBm, and units are capable of processing pulse widths from 100 nanoseconds to 20 microseconds.

APPLICATIONS:

- ESM and ECM Systems
- Medium Range Power Measurement

SPECIFICATIONS:

(1) MODEL	(2) FREQUENCY GHz	(3) USEFUL DYNAMIC RANGE AT 25° C after warmup time signal noise = 16 dB min. (dBm)	(4) USEFUL DYNAMIC RANGE OVER -20° C to +71° C after warmup time signal noise = 16 dB min. (dBm)	(5) (6) NOMINAL FREQUENCY FLATNESS ERROR		(7) (8) NOMINAL VSWR		(9) T.S.S. @ 25° C and 10 MHz Bandwidth Signal noise = 8 dB min. (dBm)
				UP TO -20 dBm dB	UP TO 0 dBm dB	UP TO -20 dBm	UP TO 0 dBm	
HLA 2040	2-4	-42 to 0	-41 to 0	±0.25	±0.50	2.0:1	2.5:1	-46.75
HLA 4080	4-8	-40 to 0	-39 to 0	±0.40	±0.75	2.5:1	3.00:1	-45.25
HLA 8012	8-12	-40 to 0	-39 to 0	±0.40	±0.75	2.5:1	3.00:1	-45.25
HLA 1218	12-18	-38 to 0	-37 to 0	±0.50	±1.00	2.5:1	3.25:1	-42.75
HLA 2018	2-18	-38 to 0	-37 to 0	±1.00	±1.75	3.0:1	3.50:1	-42.75

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SPECIFICATIONS:

1. Amplitude Performance @ Ambient (25° C)

Log Accuracy for power levels in Column (3) at any single frequency, and after three minute warmup time. (Deviation from straight line):

±0.5 dB

2. Amplitude Performance Over Temperature

A. Deviation time from 25° C value after 5 minute warmup time for power levels in Column (4):

±0.6 dBm max.

B. At -54° C, add a total of 0.6 dB additional error.

3. Rise Time:

35 nanoseconds maximum

4. Propagation Delay from 50% RF to 50% video:

30 nanoseconds maximum

5. Total Response Time from 50% RF to the final value so that an amplitude measurement within accuracy specifications can be made:

85 nanoseconds maximum

6. Recovery Time:

Defined such that the amplitude of a pulse at power levels shown in Columns (3) and (4) when preceded by a 0 dBm pulse can be accurately decoded

up to -10 dBm:

1.0 microseconds maximum

up to 0 dBm:

2.0 microseconds maximum

up to +5 dBm:

3.5 microseconds maximum

The above includes the effect of temperature. Typical units feature about half values.

7. Log Slope (Nominal):

50 mv/dB

8. Power Supply:

±15.0 VDC @
75 mA (Nom.) each supply

9. Connectors:

Input:

SMA - Male

Output:

SMA - Female

Power Supply:

Feedthrough's

All Connectors are on 2.65" x 0.65" surface.

10. Size:

3.5" x 2.65" x 0.65"

For further information please contact:

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