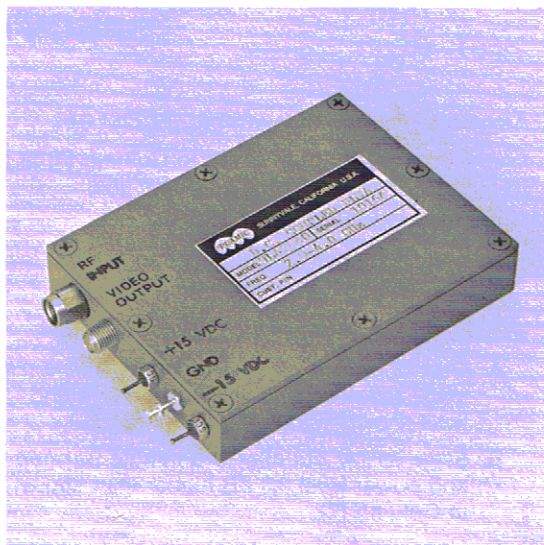




# DIRECT COUPLED RF LOG DETECTORS



## FEATURES

- Miniaturized
- Low Drift
- Low Recovery Time
- Wide Temperature Range

## DESCRIPTION:

PLAMIC's DHLA Series of RF Log Detectors are designed using an optimum combination of discrete, integrated and thick film hybrid 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. DHLA Series is capable of processing C.W. or pulses down to 100 nanoseconds.

## APPLICATIONS:

- ESM and ECM Systems
- Medium Dynamic Range Power Measurement
- C.W. and Pulse Processing in One Unit

## SPECIFICATIONS:

(1) MODEL	(2) FREQUENCY GHz	(3) USEFUL DYNAMIC RANGE AT 25°C after warmup time  signal noise (dBm) = 16 dB min.	(4) USEFUL DYNAMIC RANGE OVER -20°C to +71°C after warmup time signal noise (dBm) = 16 dB min.	(5) (6) NOMINAL FREQUENCY FLATNESS ERROR		(7) (8) NOMINAL VSWR		(9) T.S.S. @ 25°C and 10 MHz Bandwidth Signal noise (dBm) = 8 dB min.
				UP TO -20 dBm dB	UP TO 0 dBm dB	UP TO -20 dBm	UP TO 0 dBm	
DHLA 2040	2-4	-37 to 0	-35 to 0	±0.25	±0.50	2.0:1	2.5:1	-42.25
DHLA 4080	4-8	-35 to 0	-33 to 0	±0.40	±0.75	2.5:1	3.00:1	-40.50
DHLA 8012	8-12	-35 to 0	-33 to 0	±0.40	±0.75	2.5:1	3.00:1	-40.50
DHLA 1218	12-18	-33 to 0	-31 to 0	±0.50	±1.00	2.5:1	3.25:1	-38.25
DHLA 2018	2-18	-33 to 0	-31 to 0	±1.00	±1.75	3.0:1	3.50:1	-38.25

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## SPECIFICATIONS:

### 1. Amplitude Performance at Ambient (25° C)

Log accuracy for power levels in Column (3) at any single frequency (Deviation from a straight line):

- A. After 12 minute warmup time ±0.5 dB max.
- B. After 2 minute warmup time and power level 3.0 dB higher than Column (3): ±0.5 dB max.

### 2. Amplitude Performance Over Temperature

- A. Deviation from 25° C value after 12 minutes stabilization time at any temperature and level shown in Column (4): ±0.75 dB max.
- B. Same as 2A, but after two minute warmup time and power level 3.0 dB higher than shown in Column (4): ±0.75 dB max.
- C. Units will work @ -54° C with an additional total error of 0.65 dB after 25 minute stabilization time.

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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