

| REVISIONS |      |                              |          |                    |
|-----------|------|------------------------------|----------|--------------------|
| ZONE      | REV. | DESCRIPTION                  | DATE     | APPROVED           |
|           | A    | ORIGINAL RELEASE JOB# 307165 | 08/09/93 | <i>[Signature]</i> |

## DESCRIPTION

THE LVD-218 SERIES DLVA'S ARE AVAILABLE IN EXTENDED 70/75dB AND STANDARD 50dB DYNAMIC RANGE OVER THE FULL 0.5-18 GHz BANDWIDTH, WITH TRUE DC COUPLING. UNITS EMPLOY PLANAR DIODE DETECTORS AND INTEGRATED VIDEO CIRCUITRY FOR HIGH SPEED PERFORMANCE AND OUTSTANDING RELIABILITY. THE DLVA'S ARE OF SUPERIOR CONSTRUCTION USING STATE-OF-THE-ART MIC/MMIC TECHNOLOGY. THE SIZE IS 3.0" x 3.5" x 0.5".

## FEATURES

- TRULY DC COUPLED
- WIDE BANDWIDTHS
- FAST RISE TIMES
- SHORT RECOVERY TIMES
- SUPERIOR ACCURACY
- EXTENDED DYNAMIC RANGE CAPABILITY
- MINIATURE SIZE
- 7.2 OZ WEIGHT

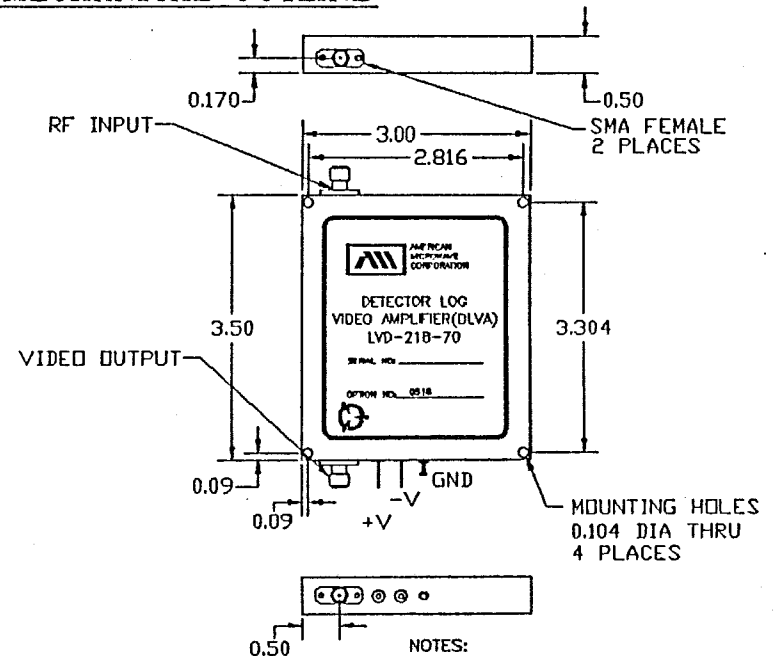
## SPECIFICATIONS

- FREQUENCY RANGE ..... 0.5 TO 18 GHz
- FREQUENCY FLATNESS .....  $\pm 2.0$ dB TYPICAL ( $\pm 2.5$ dB MAXIMUM)
- TSS ..... -68dBm (-70dBm 6-18 GHz)
- VSWR ..... 3.0:1 MAXIMUM (2.5:1 TYPICAL)
- DYNAMIC RANGE ..... 80dB
- LOGGING RANGE ..... -70 TO +10dBm
- LOG LINEARITY .....  $\pm 1.75$ dB
- LOG SLOPE ..... 50mV/dB OR AS DESIRED
- LOG SLOPE ACCURACY .....  $\pm 5\%$  MAXIMUM OF AVERAGE SLOPE
- LOG TEMPERATURE STABILITY .....  $\pm 1.5$ dB (0°C TO 60°C)
- RISE TIME ..... 30nS MAXIMUM, 20nS TYPICAL
- RECOVERY TIME ..... 250nS TYPICAL, 350nS MAXIMUM
- VIDEO LOAD ..... 50 OHMS (TYPICAL), OR AS DESIRED
- DC POWER (NO LOAD)
  - +V ..... 9 TO 18V @ 350mA TYPICAL, 375mA MAXIMUM
  - V ..... 9 TO 18V @ 200mA MAXIMUM
- SIZE ..... 3.00" x 3.5" x 0.5"

## AVAILABLE OPTIONS (SPECIFY)

- A01 ..... EXTENDED 0.2 TO 20 GHz RF FREQUENCY RANGE
- A02 ..... EXTENDED 0.5 TO 18 GHz RF FREQUENCY RANGE
- A03 ..... FASTER RISE/RECOVERY TIMES
- A04 ..... ALTERNATE LOG SLOPES
- A05 ..... HIGH POWER RF CW/PEAK PROTECTION
- A06 ..... EXTENDED LOGGING RANGE
- A07 ..... OTHER VIDEO LOADS
- A08 ..... -54°C TO +85°C WITH LOG TEMPERATURE STABILITY OF  $\pm 1.75$ dB


## MECHANICAL OUTLINE



- NOTES:
- 1) DIMENSIONS ARE IN INCHES
  - 2) TOLERANCES: X.XX  $\pm 0.020$   
X.XXX  $\pm 0.010$
  - 3) WEIGHT: 7.2 OZ
  - 4) UNIT IS EPOXY SEALED

## ENVIRONMENTAL RATINGS

- TEMPERATURE ..... -54°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

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|---|----------|---|--|
|  |          | <b>AMERICAN MICROWAVE CORPORATION</b><br>7311G GROVE RD., FREDERICK, MD. 21701<br>TEL: (301) 662-4700 FAX: (301) 662-4938 |  |
| APPROVALS   | DATE     | PRODUCT FEATURE   |  |
| DRAWN<br><i>R.A.</i>  | 08/09/93 | <b>LVD-218-70/75 (OPTION 0518)</b>  |  |
| CHECKED   |          | 0.5 TO 18 GHz, 70/75dB, TRULY DC-COUPLED DETECTOR LOG VIDEO AMPLIFIER   |  |