

DESCRIPTION

THE LVDM-218-70-R611-62-60 MINIATURE DLVA IS A 6.8 TO 10.5 GHz DLVA (EXTENDED FREQUENCY RANGES AVAILABLE) WITH LOW CURRENT DRAW, HIGH RELIABILITY, -60 dBm TANGENTIAL SENSITIVITY (-65 dBm UNITS AVAILABLE), AND 58 dB DYNAMIC RANGE (60 dB, 65 dB, 70 dB AND 75 dB UNITS AVAILABLE) WITH TRUE DC COUPLING. THESE UNITS EMPLOY PLANAR DIODE DETECTORS AND INTEGRATED VIDEO CIRCUITRY FOR HIGH SPEED PERFORMANCE AND HIGH RELIABILITY. THE DLVA'S ARE OF SUPERIOR CONSTRUCTION USING STATE-OF-THE-ART TECHNOLOGY. THE SIZE IS 3.4" x 1.75" x 0.5".

FEATURES

- TRULY DC COUPLED
- WIDE BANDWIDTHS
- FAST RISE TIMES
- FAST SETTLING
- SHORT RECOVERY TIMES
- LOW CURRENT DRAW
- SUPERIOR ACCURACY
- WIDE DYNAMIC RANGE
- MINIATURE SIZE
- HIGH RELIABILITY
- VERY STABLE
- ≤ 4.0 OZ WEIGHT

SPECIFICATIONS

- FREQUENCY RANGE 6.8 TO 10.5 GHz (6 TO 18 GHz OR 2 TO 6 GHz, 2 TO 18 GHz OR 0.5 TO 18 GHz AVAILABLE)
- LOG SLOPE 100 mV/dB ±10 mV NOMINAL (WITH 100 Ω ±10% LOAD) (OTHER SLOPES AVAILABLE)
- LOGGING DYNAMIC RANGE -56 TO +2 dBm MINIMUM (OUTPUT VOLTAGE @ -56 dBm AND 25°C = 300 mV ±50 mV @ 8.65 GHz AND @ +2 dBm, OUTPUT VOLTAGE = 6.1 V NOMINAL) (60 dB, 65 dB, 70 dB OR 75 dB RANGES AVAILABLE)
- LOG LINEARITY ±1.3 dB MAXIMUM (FROM BEST FIT STRAIGHT LINE)
- FREQUENCY FLATNESS ±1.5 MAXIMUM (6.8 TO 10.5 GHz)
- LOG STABILITY OVER TEMPERATURE ±1.25 dB MAXIMUM (-40°C TO +85°C)
- TSS LEVEL -60dBm MINIMUM (-65dBm UNITS AVAILABLE)
- ABSOLUTE ACCURACY ±2.5dB (±250 mV) MAXIMUM (DEVIATION FROM THE IDEAL TRANSFER FUNCTION)
- RISE TIME (10% TO 90% POINTS) 20ns MAXIMUM
- SETTLING TIME 40ns MAXIMUM (TO WITHIN ±100 mV OR ±1.0 dB)
- RECOVERY TIME 400ns MAXIMUM (TO WITHIN ±100 mV OR ±1.0 dB)
- INPUT RF POWER +15 dBm MAXIMUM
- INPUT VSWR 3.0:1 MAXIMUM
- DC OFFSET -400 mV TO +25 mV
- VIDEO LOAD IMPEDANCE 100 Ω ±0.5 Ω
- OUTPUT BASELINE NOISE < +75 mV MAXIMUM (ABOVE GROUND INCLUDING THE EFFECT OF DC OFFSET)
- DC POWER
 - +V +15V ±3%, 200mV RIPPLE: +400 mA MAXIMUM
 - V -15V ±3%, 200mV RIPPLE: -150 mA MAXIMUM
- SIZE 3.4" x 1.75" x 0.5"
- WEIGHT ≤ 4.0 oz.

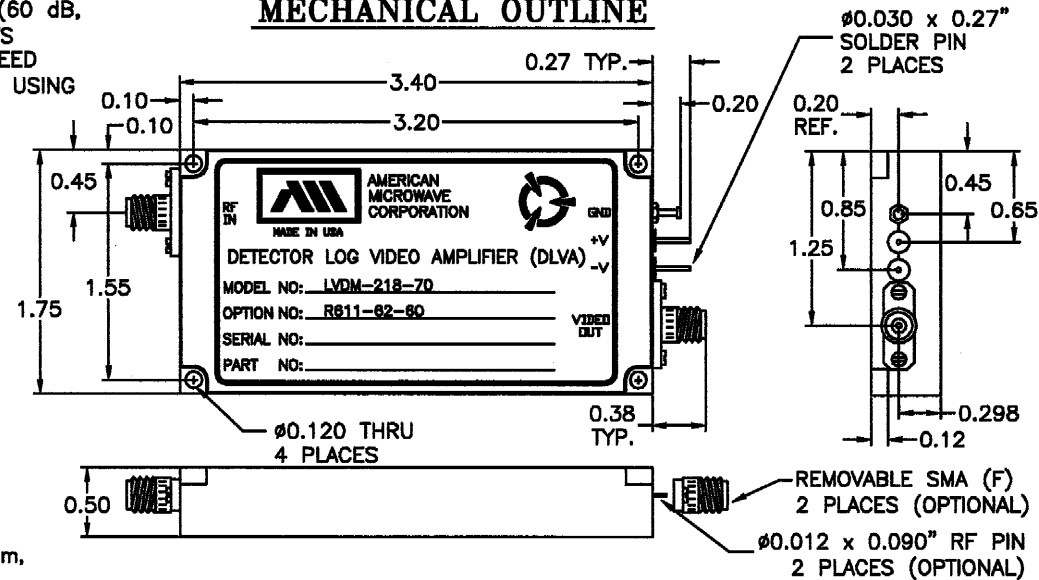
AVAILABLE OPTIONS (SPECIFY)

- 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

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
		JOB# 311275-1 RODALE ELECTRONICS	2/2/98	

MECHANICAL OUTLINE



ENVIRONMENTAL RATINGS (STANDARD)

- 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

HIGH RELIABILITY RATINGS

- ACCELERATION 0.2G²/Hz FROM 10-500Hz X, Y & Z AXIS, 2 HOURS PER AXIS (POWER SPECTRAL DENSITY)
- RANDOM VIBRATION X AXIS TO 100 Hz @ 0.04 G²/Hz, 150-400 Hz @ 1.0 G²/Hz (POWER SPECTRAL DENSITY) Y AXIS TO 130 Hz @ 0.04 G²/Hz, 130-250 Hz @ 4.0 G²/Hz, 250-500 Hz, 6 dB Z AXIS TO 100 Hz @ 0.10 G²/Hz, 100-300 Hz @ 4.0 G²/Hz, 300-500 Hz, 6 dB
- SINUSOIDAL VIBRATION X AXIS 35-100 Hz @ 6 G RMS, 100-250 Hz @ 15 G RMS Y & Z AXIS 35-100 Hz @ 6 G RMS, 100-250 Hz @ 30 G RMS

ACTUAL TESTING HAS BEEN PERFORMED FOR VIBRATION PER MIL-STD-202F, METHOD 204, 0.2G²/Hz FROM 10-500 Hz X,Y & Z AXIS 15 MINUTES PER AXIS

NOTES:

- 1) DIMENSIONS ARE IN INCHES
- 2) TOLERANCES: X.XX ±0.020
X.XXX ±0.010
- 3) WEIGHT: ≤4.0 OZ
- 4) UNIT IS EPOXY SEALED



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APPROVALS	DATE
DRAWN WSP	2/2/98
CHECKED	

PRODUCT FEATURE

LVDM-218-70-R611-62-60

6.8 TO 10.5 GHz, 58 dB, TRULY DC-COUPLED DETECTOR LOG VIDEO AMPLIFIER

SIZE A SHEET 1 OF 2 DWG. # 100-4267