

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	ORIGINAL RELEASE	11/12/92	<i>[Signature]</i>

**DESCRIPTION**

AMC MODEL TDLVA-0518-50 HAS 30/35dB LOGGING DYNAMIC RANGE WITH THRESHOLD DETECTION CAPABILITY. VIDEO OUTPUT BELOW THRESHOLD IS WITHIN ±20mV DC AND WITH A NOISE LEVEL OF UNDER 25mV RMS. LOGGING ABOVE THRESHOLD IS INSTANTANEOUS WITH A DYNAMIC RANGE OF 30/35dB MINIMUM. DIFFERENT THRESHOLD LEVELS FROM -35dBm TO -10dBm ARE AVAILABLE WITH A TYPICAL INPUT VSWR OF 1.5:1. LOG LINEARITY ABOVE THRESHOLD IS ±0.5dB (-55°C TO +85°C) WITH ±1.0dB LOG STABILITY. AMC'S TDLVA'S OFFER PULSE RESPONSE FROM 50nS TO CW AND WITH RISE TIMES OF 20nS AND RECOVERY TIMES OF UNDER 50nS. FREQUENCY RANGE IS 0.5 TO 18 GHz, WITH FLATNESS OF ±1.0dB TYPICAL. SIZE OF THE UNIT IS 2.2" x 1.5" x 0.4".

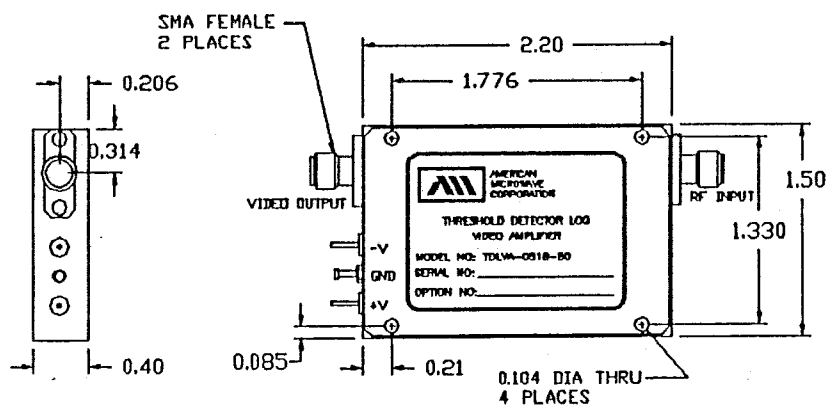
**SPECIFICATIONS**

- FREQUENCY RANGE ..... 0.5 TO 18 GHz
- FREQUENCY FLATNESS ..... ±1.0dB MAXIMUM
- THRESHOLD ..... -35dBm ±1.0dB TOLERANCE (OVER TEMPERATURE ±1.5dB)
- LOGGING RANGE ..... -35 TO 0 dBm (NOMINAL)
- USEFUL RANGE ..... -35 TO +5dBm
- LOG LINEARITY ERROR ..... ±0.5dB MAXIMUM
- LOG SLOPE ..... 50mV/dB
- LOG SLOPE ACCURACY ..... ±4% OF AVERAGE SLOPE
- LOG TEMPERATURE STABILITY ..... ±1.0dB MAXIMUM (-54° TO +85°C)
- PULSE RESPONSE ..... 50nS TO CW
- RISE TIME ..... 20nS MAXIMUM
- SETTLING TIME ..... 45nS MAXIMUM
- RECOVERY TIME ..... 50nS MAXIMUM
- VSWR ..... 2:1 MAXIMUM
- VIDEO OUTPUT
  - DC ..... ±20mV MAXIMUM (BELOW THRESHOLD)
  - AC ..... 25mV RMS MAXIMUM (BELOW THRESHOLD)
- VIDEO LOAD ..... 50Ω MINIMUM
- MAXIMUM RF INPUT ..... +15dBm
- DC POWER (NO LOAD)
  - +V ..... 9 TO 18V @ 75mA MAXIMUM
  - V ..... 9 TO 18V @ 75mA MAXIMUM
- SIZE ..... 2.2" X 1.5" X 0.4"

**OPTIONS (SPECIFY)**

- A01 ..... ALTERNATE THRESHOLD LEVELS -35 TO -10dBm
- A02 ..... 0.2 TO 20 GHz RF EXTENDED FREQUENCY RANGE
- A03 ..... ALTERNATE LOG SLOPE
- A04 ..... HIGH RF CW/PEAK POWER PROTECTION

**MECHANICAL OUTLINE**




**NOTES:**

- 1) DIMENSIONS ARE IN INCHES
- 2) TOLERANCES: X.XX ±0.020  
X.XXX ±0.010
- 3) WEIGHT: 1.75 OZ

**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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APPROVALS	DATE	<b>PRODUCT FEATURE</b>	
DRAWN <i>WSP</i>	11/12/92	<b>TDLVA-0518-50</b>	
		0.5 TO 18 GHz, 30/35dB THRESHOLD DETECTOR LOG VIDEO AMPLIFIER	

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