

DESCRIPTION

AMC'S 0.5 TO 18 GHz DLVA, MODEL LVDS-0518-50, OFFERS 3 SEPARATE SWITCHED VIDEO FILTERS. TTL CONTROL SIGNAL SWITCHES 30 MHz, 3 MHz, OR 300 KHz VIDEO BANDWIDTH FILTERS GIVING TSS OF -42dBm, -46dBm, AND -50dBm. SELECTING VIDEO FILTERS DOES NOT AFFECT THE -40dBm TO 0 dBm DYNAMIC LOGGING RANGE WHICH HAS A LINEARITY ERROR OF ± 0.5 dB, FREQUENCY FLATNESS FROM 0.5 TO 18 GHz OF ± 1.0 dB, AND TEMPERATURE STABILITY (-54° TO +85°C) OF ± 1.0 dB.

SPECIFICATIONS

- FREQUENCY RANGE 0.5 TO 18 GHz
- FREQUENCY FLATNESS ± 1.0 dB MAXIMUM
- LOGGING RANGE -40 TO 0 dBm MINIMUM
- USEFUL RANGE -40 TO +5dBm
- LOG LINEARITY ERROR ± 0.5 dB MAXIMUM
- LOG SLOPE 50mV/dB
- LOG SLOPE ACCURACY $\pm 4\%$ OF AVERAGE SLOPE
- TEMPERATURE STABILITY ± 1.0 dB MAXIMUM (-54 TO +85°C)
- TSS

VIDEO BANDWIDTH 1 (30 MHz) -42dBm MINIMUM

VIDEO BANDWIDTH 2 (3 MHz) -46dBm MINIMUM

VIDEO BANDWIDTH 3 (0.3 MHz) -50dBm MINIMUM

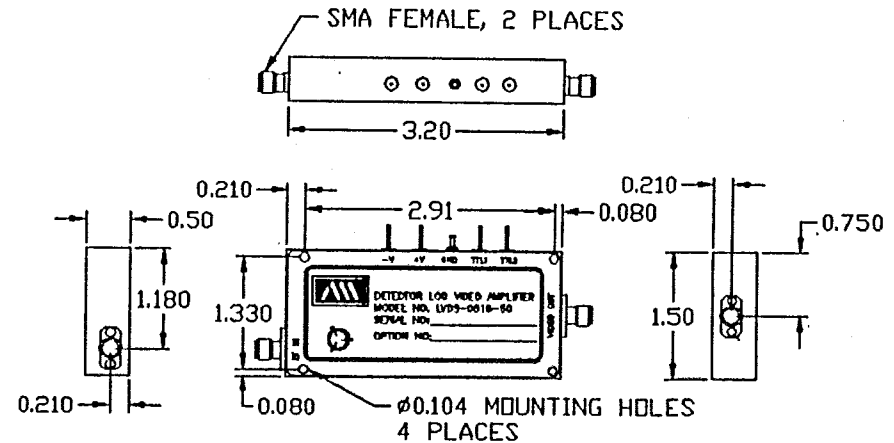
- PULSE RESPONSE 50ns TO CW (VIDEO BANDWIDTH 1)
- RISE TIME 20ns MAXIMUM (VIDEO BANDWIDTH 1)
- SETTLING TIME 45ns MAXIMUM (VIDEO BANDWIDTH 1)
- RECOVERY TIME 150ns TYPICAL 300ns MAXIMUM (VIDEO BANDWIDTH 1)
- VIDEO OUTPUT RANGE 0 TO 2.5 VOLTS
- VIDEO OFFSET 100mV MAXIMUM
- VSWR (RF) 3:1 MAXIMUM
- MAXIMUM RF INPUT +15dBm
- VIDEO LOAD 50 Ω MINIMUM
- DC POWER (NO LOAD)
 - +V 9 TO 15V @ 100mA MAXIMUM
 - V 9 TO 15V @ 100mA MAXIMUM
- SIZE 3.2" X 1.5" X 0.5"

AVAILABLE OPTIONS (SPECIFY)

- A01 0.2 TO 20 GHz RF FREQUENCY RANGE
- A02 ALTERNATIVE LOG SLOPES, AS DESIRED
- A03 ALTERNATIVE VIDEO BANDWIDTHS, AS DESIRED
- A04 HIGH RF CW/PEAK POWER PROTECTION
- A05 OTHER VIDEO LOADS
- A06 EXTENDED DYNAMIC RANGE

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	ORIGINAL RELEASE	11/21/82	<i>[Signature]</i>

MECHANICAL OUTLINE



NOTES:

- 1) DIMENSIONS ARE IN INCHES
- 2) TOLERANCES: X.XX ± 0.020
X.XXX ± 0.010
- 3) WEIGHT: 2.9 OZ

ENVIRONMENTAL RATINGS

- TEMPERATURE -54C TO +85C (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	PRODUCT FEATURE	
DRAWN <i>WSP</i>	11/21/82	LVDS-0518-50	
CHECKED		0.5 TO 18 GHz, 40/45dB DETECTOR LOG VIDEO AMPLIFIER (DLVA) WITH SWITCHABLE VIDEO FILTERING	