

DESCRIPTION

PMI MODEL ERDLVA-2G8G-65-70MV-TF IS A CW IMMUNE ERDLVA THAT OPERATES FROM 2.0 TO 8.0GHz. THIS MODEL FEATURES AN INTERNAL SWITCH USED TO SWITCH BETWEEN THE BIT IN AND RF IN WITH INPUT BLANKING ON BOTH PORTS. THE VIDEO OUTPUT IS DESIGNED TO DRIVE A 100 FT. CABLE..

RF SPECIFICATIONS

- FREQUENCY RANGE..... 2.0 GHz TO 8.0 GHz
- INPUT VSWR 2.3:1 MAX
- INPUT POWER MAX 1 WATT CW, 100 WATT PEAK @PW= 1us & 1% DUTY

SWITCH CHARACTERISTICS

- SWITCH MODE..... (1) RF INPUT, (2) BIT, (3) CHOP
- ISOLATION..... 60 dB MIN ALL PORTS
- SWITCHING SPEED..... 100ns MAX

VIDEO OUTPUT SPECIFICATIONS

- TSS..... -71 dBm
- DYNAMIC RANGE..... -65 TO 0 dBm
- LOG SLOPE..... 70 mV/dB ± 3 mV/dB
- LOG LINEARITY..... ± 1.0 dB MAX
- LOG ACCURACY @ 25°C..... ± 1.25 dB MAX
- ABSOLUTE LOG ACCURACY..... ± 2.0 dB MAX
- DC OFFSET..... 0 to 100 mV
- RISE TIME..... 28ns MAX (10-90% @ -40 & -10dBm)
- FALL TIME..... 300ns MAX (@ -40 & -10dBm)
- SETTLING TIME..... 50 ns MAX (FROM 10% TO WITHIN 35mV OF FINAL VALUE @ -40 & -10 dBm)
- RECOVERY TIME..... 500ns MAX (FROM 90% TO WITHIN 1dB OF BASELINE)
- VIDEO FREQUENCY FLATNESS..... ± 1.25 dB MAX @ 25°C
- PULSE WIDTH PROCESS RANGE... 100ns TO 100us
- VIDEO OUTPUT LOAD IMPEDANCE... 95 ± 1 OHMS
- VIDEO OUTPUT @ -65 dBm..... 330 ± 88 mV FOR ALL FREQUENCIES
- VIDEO OUTPUT DRIVE CAPABILITY.. DRIVING 100 ft RG180 INTO 95 OHMS LOAD
- PULSE DENSITY CAPABILITY..... 20% DUTY @ 100ns PW, 70% DUTY @ 100us PW
- NOISE LEVEL..... 30mV RMS MAX
- PULSE DROOP @ -65dBm..... 70mV MAX FOR PW 100us
- PROPAGATION DELAY..... 80ns MAX FROM 50% RF TO 10% VIDEO.
- CW IMMUNE POWER..... TSS TO -40dBm
- BASELINE SHIFT 200mV MAX @ -40 dBm CW

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
		PRELIMINARY	12-18-20	JM

- PULSE AMPLITUDE LOSS WITH PULSE POWER = -30dBm
 - CW POWER = -50dBm, NO LOSS
 - CW POWER = -40dBm, 2dB LOSS MAX
- CW IMMUNE TIME @ CW= -40dBm..... 4ms MAX
- CW RECOVERY TIME @CW= -40dBm.... 120us MAX
- DC POWER..... $\pm 15V \pm 5%$ @ 0.4A MAX FOR +15V
0.2A MAX FOR -15V
- RIPPLE DC TO 10 MhZ..... 100 mV MAX
- CONNECTORS:
 - RF & VIDEO..... SMA FEMALE
 - DC POWER & CONTROL..... 9 PIN D-SUB FEMALE

ENVIRONMENTAL SPECIFICATIONS / E.S.S.

(ESS TEST PERFORMED 100%, REPORT PROVIDED FOR 10% OF ORDERED QTY)

- MTBF..... 5000H @50°C
- STABILIZATION BAKE..... 24 HOURS @ +85°C
- THERMAL SHOCK..... -10°C TO +85°C, 10 CYCLES
1 HOUR DWELL TIME AT EACH TEMP, RATE OF TEMP CHANGE 15°C/MIN
- RANDOM VIBRATION..... 20Hz TO 2000Hz, RANDOM
16.8 GRMS IN ALL 3 AXIS FOR 15 MINUTES MIN.
- BURN IN..... 48 HOURS @ +85°C DC POWER ON
- OPERATING TEMPERATURE..... -10°C TO +85°C
- FINISH: _____ GRAY PAINT, NO PAINT
ON MOUNTING SURFACE

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

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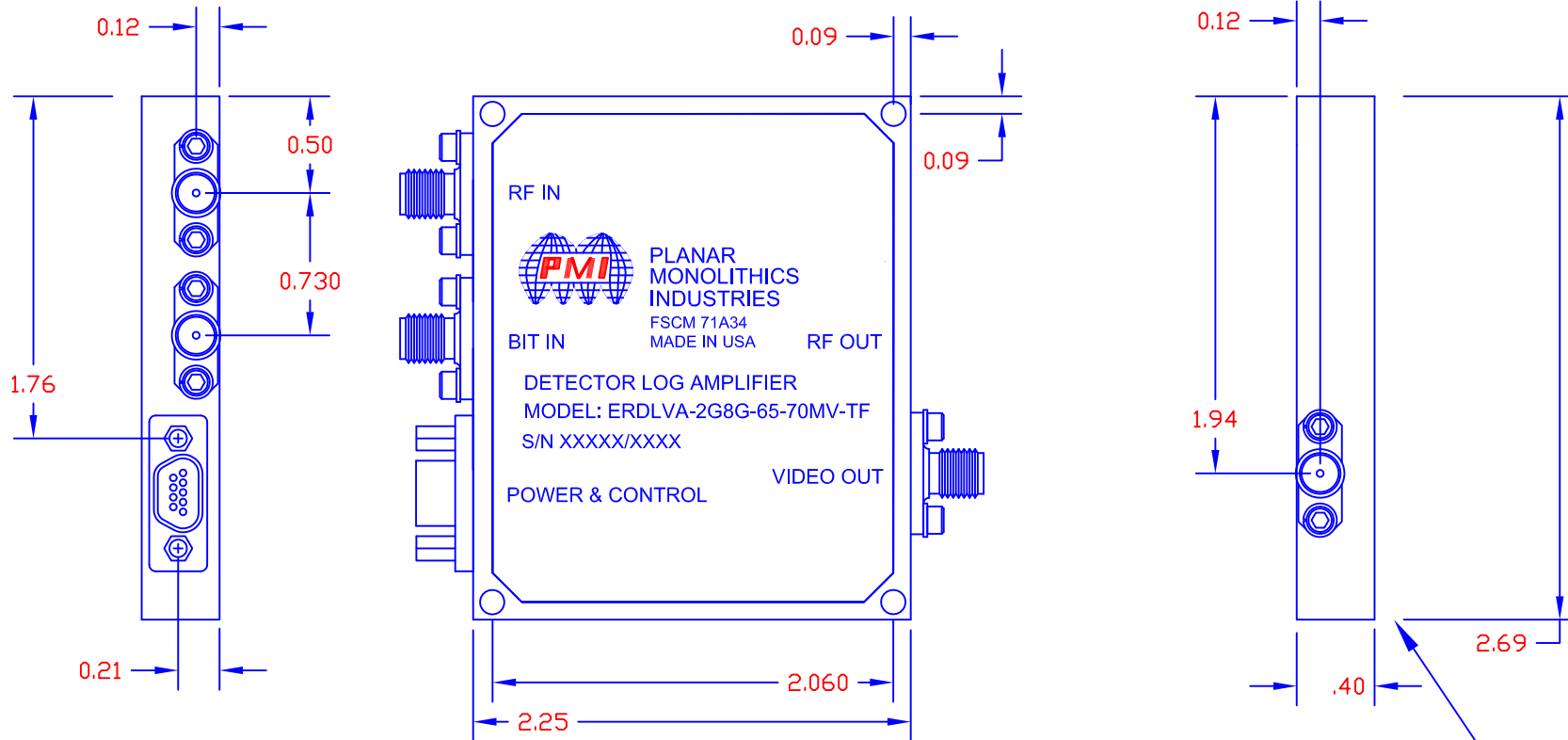


NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

APPROVALS		DATE	TITLE			
DRAWN	JM	12-18-20	PRODUCT FEATURE ERDLVA-2G8G-65-70MV-TF			
CHECKED			SIZE	FSCM NO.	DWG NO.	REV.
ISSUED			A	71A34	PRELIMINARY	
			SCALE	N:S	SHEET	1 OF 3

MECHANICAL OUTLINE

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MICRO-D CONNECTOR PINS	
PIN NO.	FUNCTION
1	+15VDC
2	GND
3	NC
4	SW CONTROL TTL 1
5	SW CONTROL TTL 2
6	+15VDC
7	-15VDC
8	-15VDC
9	GND

SWITCH CONTROL TTL LOGIC TABLE		
COMMAND MODES	PIN 4	PIN 5
RF INPUT MODE	TTL LOW	TTL LOW
BIT INPUT MODE	TTL HIGH	TTL LOW
RF INPUT CHOP	TTL LOW	TTL HIGH
BIT INPUT CHOP	TTL HIGH	TTL HIGH

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX ±0.01
X.XXX ±0.005

NO PAINT ON MOUNTING SURFACE

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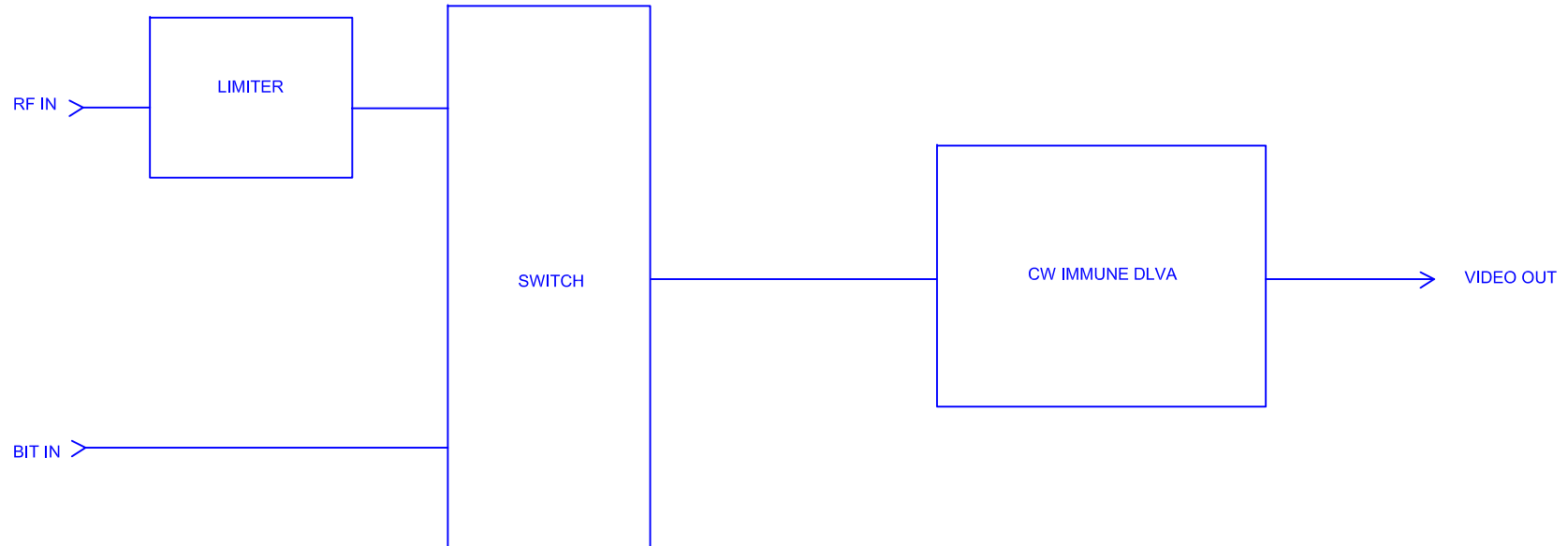
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FUNCTIONAL BLOCK DIAGRAM

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