

DESCRIPTION:

PMI MODEL NO. SDLVA-218-68-70MV IS A CW IMMUNE SDLVA (SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER). THIS UNIT OPERATES FROM 2.0 TO 18.0 GHz. IT HAS THE ABILITY TO INTERFACE WITH A LONG CABLE (100 FT), WHILE MAINTAINING HIGH SPEED, FLATNESS AND ACCURACY.

SPECIFICATIONS:

- FREQUENCY: 2.0 GHz TO 18.0 GHz
- FREQUENCY FLATNESS: ±2.0dB MAX
- SIGNAL CAPABILITY: PULSE (100ns – 300µS), PULSE ON CW
- INPUT VSWR: 2.2:1 MAX
- MAX INPUT LEVEL: 1 WATT CW, 100 WATT PEAK @ PW=1us& & 1% DUTY CYCLE
- PULSE PEAK AMPLITUDE LOSS: CW LEVEL: –50dBm: NO LOSS, –40dBm: 2.5dB MAX
- TSS –70dBm
- LOG DYNAMIC RANGE: –68dBm TO 0dBm
- LOG SLOPE 70±3 mV/dB
- LOG LINEARITY: ±1.5dB MAX AT 25°C AND FREQUENCY RANGE,
- VIDEO OUTPUT RANGE: –68dBm: 250mV±125mV
- DC OFFSET 0–100mV TYP
- NOISE LEVEL 200mV P–P (BRIGHT BAND NOISE) WITHOUT RF
- LOG ACCURACY FROM 70mV/dB: ±2dB MAX AT 25°C AND FREQUENCY RANGE,
- ABSOLUTE ACCURACY FROM 70mV/dB: ±2.5dB MAX AT FULL TEMPERATURE AND FREQUENCY RANGE
- OUTPUT RISE TIME 25nS (typ); 28ns (max)
- SETTLING TIME 50nS MAX, 10% OUTPUT TO ±0.5dB OF FINAL VALUE AT PULSE PEAK POWER –40 & –10dBm
- FALLING TIME 300nS MAX, 90% OUTPUT TO 10% AT PULSE PEAK POWER –40 & –10dBm
- RECOVERY TIME 500nS MAX, MEASURED FROM EDGE OF 10 MICROSECOND PULSE TO LEADING EDGE OF NEXT 10 MICROSECOND PULSE TO WITHIN 1dB OF BASELINE PULSE PEAK POWER AT (300us, 0dBm), AND ACCEPT FOLLOWING SMALL PULSE (100ns, –65dBm) WITHOUT PULSE DROOP
- PULSE WIDTH RANGE: 100 ns TO 300us
- VIDEO OUTPUT DRIVE: THROUGH 100 Feet, 75Ω CABLE (RG11) & 75 OHM LOAD
- VIDEO OUTPUT @ –68 dBm 250mV ±140mV
- POWER SUPPLY +15VDC @ 500mA MAX 100mV RIPPLE DC TO 10MHZ
–15VDC @ 200mA MAX 100MV RIPPLE DC TO 10MHZ
- OPERATING TEMPERATURE: 0°C TO +85°C
- SIZE (L) 3.5in X (W) 2.5in X (H) 0.5in
(L) 88.9mm X (W) 63.5mm X (H) 12.7mm
- FINISH MIL–SPEC EPOXY PAINT – GRAY
MOUNTING SURFACE FREE OF PAINT
- COOLING CONDUCTION COOLING AT MOUNTING SURFACE

- PULSE DENSITY CAPABILITY 20% DUTY FOR PW= 100ns; 70% DUTY FOR FOR PW= 300 us AT 0dBm WITH 1dB PULSE AMPLITUDE LOSS AND BASELINE VARIABLE
- PULSE DROOP 70mV MAX @ –68 dBm, 300 us PW.
- PROPAGATION DELAY 80 ns MAX FROM 50% RF TO 10% VIDEO EXCLUDING VIDEO CABLE
- CW IMMUNE POWER RANGE TSS TO –40dBm
- BASELINE SHIFT @ –40dBm 200mV MAX
- PULSE AMPLITUDE LOSS NO LOSS @ PULSE @ CW –50dBm, PULSE POWER @ –30dBm. 2dB LOSS @ CW –40dBm, PULSE POWER @ –30dBm WITH 500MHZ DIFFERENCE IN FREQUENCY BETWEEN PULSE AND CW
- CW IMMUNE TIME @ CW= –40dBm 3.5ms MAX
- CW RECOVERY TIME @ CW= –40dBm 100us MAX

ENVIRONMENTAL SPECIFICATIONS (E.S.S.)

- STABILIZATION BAKE 24 HOURS @ +85°C
- THERMAL SHOCK 10 CYCLES 0 TO +85°C, 1 HOUR DWELL TIME TEMPERATURE CHANGE 15°C PER MINUTE
- RANDOM VIBRATION 20Hz TO 2000Hz, RANDOM @ 16.8 GRMS, IN ALL 3 AXIS FOR 15 MINUTS MIN
- BURN-IN 48 HOURS WITH DC POWER @+85°C

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

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ISO 9001 CERTIFIED



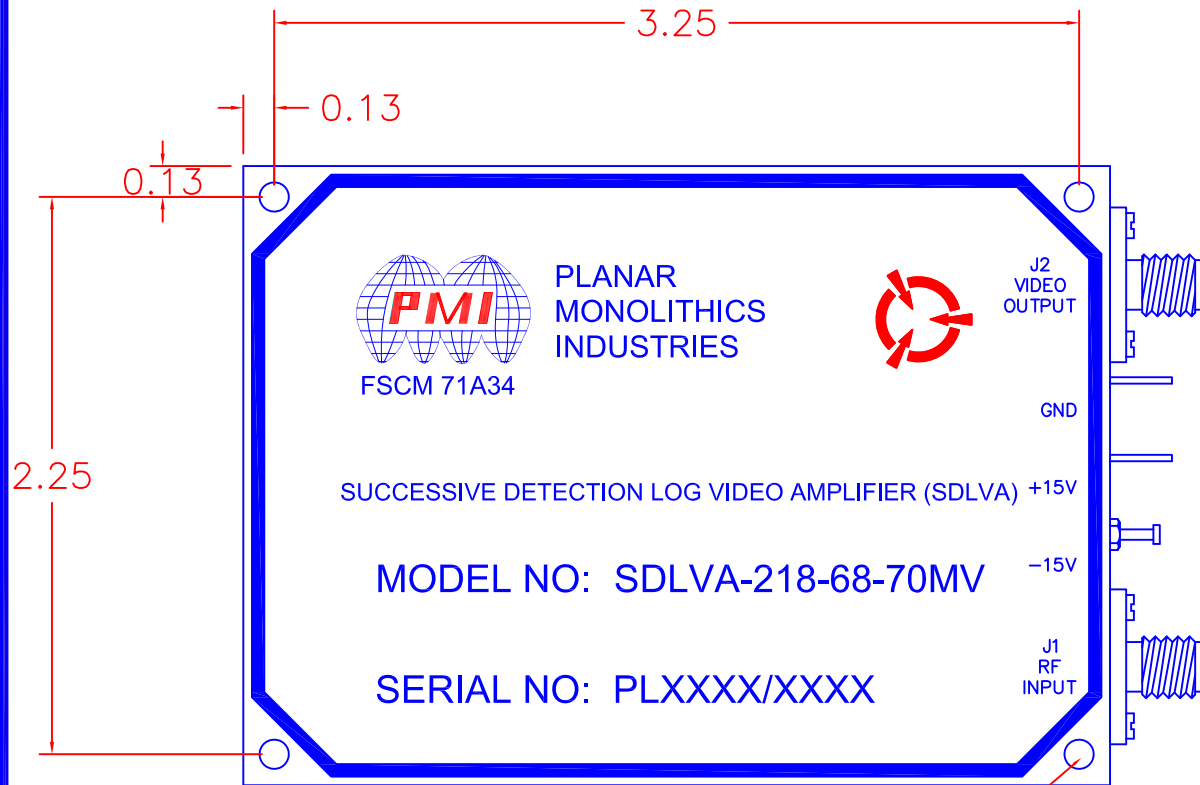
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	2	PRELIMINARY	1-30-18	

APPROVALS		DATE	TITLE			
DRAWN <i>JM</i>		1/18/18	PRODUCT FEATURE SDLVA-218-68-70MV			
CHECKED			SIZE	FSCM NO.	DWG NO.	REV.
ISSUED			A	71A34	PRELIMINARY	2
SCALE N:S			SHEET		1 OF 2	

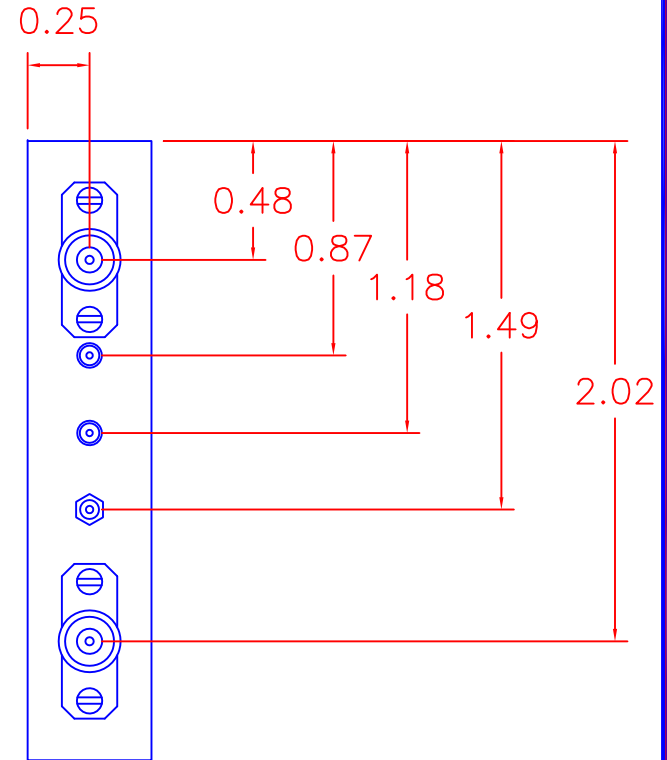
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REMOVABLE SMA (F)
2 PLACES



Ø0.118 DIA THRU, 4 PLACES

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ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX ±0.010
X.XXX ±0.005

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DRAWN	<i>JM</i>	1/18/18	PRODUCT FEATURE SDLVA-218-68-70MV			
CHECKED			SIZE	FSCM NO.	DWG NO.	REV.
ISSUED			A	71A34	PRELIMINARY	2
			SCALE	N:S		SHEET 2 OF 2