

DESCRIPTION:

PMI MODEL NUMBER PIMA-218-3S3A-32-NS3F-NSI IS AN INTEGRATED MICROWAVE ASSEMBLY CONSISTING OF 3 SWITCHES AND 3 AMPLIFIERS COVERING A FREQUENCY RANGE OF 2 GHz TO 18 GHz. THIS MODEL IS OFFERED IN THE SLIM LINE HOUSING MEASURING 4.0" X 2.0" X 0.75" WITH N-TYPE FEMALE IN AND 3 SMA FEMALE CONNECTORS OUT.

SPECIFICATIONS (MEASURED RESULTS IN RED):

FREQUENCY: 2.0 GHz TO 18.0 GHz

INSERTION LOSS (STATE 0): -4 dB MAX

INSERTION LOSS (STATES 4 & 5): 28.5 / 31 / 33.5 dB - MIN / TYP / MAX

INSERTION LOSS (STATES 2 & 3): -2.5 / 0 / 2.5 dB - MIN / TYP / MAX

INSERTION LOSS (STATE 1): -80 / -60 dB - TYP / MIN

GAIN FLATNESS (STATES 2, 3, 4 & 5): 1dB P-P FOR EVERY 1 GHz

* P1dB (J3 / J4): +32 dBm TYP (HIGH GAIN PATH)

* P1dB (J3 / J4): NOT SPECIFIED (LOW GAIN PATH)

ISOLATION: 60 dB MIN

VSWR: 2.0:1 MAX IN / OUT

NOISE FIGURE (STATES 4 & 5): 6 dB TYP / 7 dB MAX

NOISE FIGURE (STATES 2 & 3): 19 dB TYP

NOISE DENSITY <-155 dBm/Hz

NOISE FIGURE (STATES 1): NOISE DENSITY <-170 dBm/Hz

POWER HANDLING CAPABILITY: +20 dBm CW MAX

SWITCHING SPEED: 1 us MAX (50% TTL TO +/-0.5dB OF STEADY STATE)

POWER SUPPLY: +15 VDC / 800 mA MAX

-15 VDC / 200 mA MAX

+24 VDC / 880mA (Iq) and 1.5 A MAX

CONNECTORS: (1) N-TYPE (F), (3) SMA(F) & 15 PIN SUB-D-Female

LOGIC INPUT (SW1): LOGIC "0" : 0 to +0.8V (1uA)

LOGIC "1" : +2.0 to +5.0V (1uA)

DETECTION OF OVERHEAT (PIN 9): 3.3V = ON MODE

0V = OFF MODE

POWER AMP ENABLE CONTROL "1" = +3.3V ON

"0" = 0V OFF

WEIGHT: 6.0 oz MAX

SIZE: 4.0" x 2.0" x 1.13"

FINISH: BLUE EPOXY POLIMIDE COATING IAW MIL-C-22750,

TYPE I OVER EPOXY POLIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

MOUNTING SURFACE FREE OF PAINT

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ENVIRONMENTAL RATINGS

- TEMPERATURE: 0°C TO + 60°C (OPERATING)
- 55°C TO +125°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

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

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ALL DIMENSIONS ARE IN INCHES

TOLERANCES:

X.XX ±0.020

X.XXX ±0.010

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	B1	ORIGINAL RELEASE	12/18/20	
	B2	ECN # 25-0146	05/20/25	

STATE	SIGNAL PATH
0	J0 - J1
1	J0 - INTERNAL MATCHED TERMINATION
2	J0 - J3 / 0dB NOM, LOW GAIN PATH
3	J0 - J4 / 0dB NOM, LOW GAIN PATH
4	J0 - J3 / 31dB NOM, HIGH GAIN PATH
5	J0 - J4 / 31dB NOM, HIGH GAIN PATH

CONTROL					SELECTED OUT
SW1/3	SW2	SW3	ENABLE J3	ENABLE J4	
0	1	1	1	0	High Gain J3
0	1	0	0	1	High Gain J4
SW1/4	SW2	SW3	ENABLE J3	ENABLE J4	
0	0	1	1	0	Low Gain J3
0	0	0	0	1	Low Gain J4

PIN NO:	CTL / POWER
1	CTL - SW1 / 1
2	CTL - SW1 / 2
3	CTL - SW1 / 3
4	CTL - SW1 / 4
5	CTL - SW2
6	CTL - SW3
7	GND
8	GND
9	OVERHEAT DETECTOR
10	+15 VDC
11	GND
12	-15 VDC
13	ENABLE J3
14	+24 VDC
15	ENABLE J4

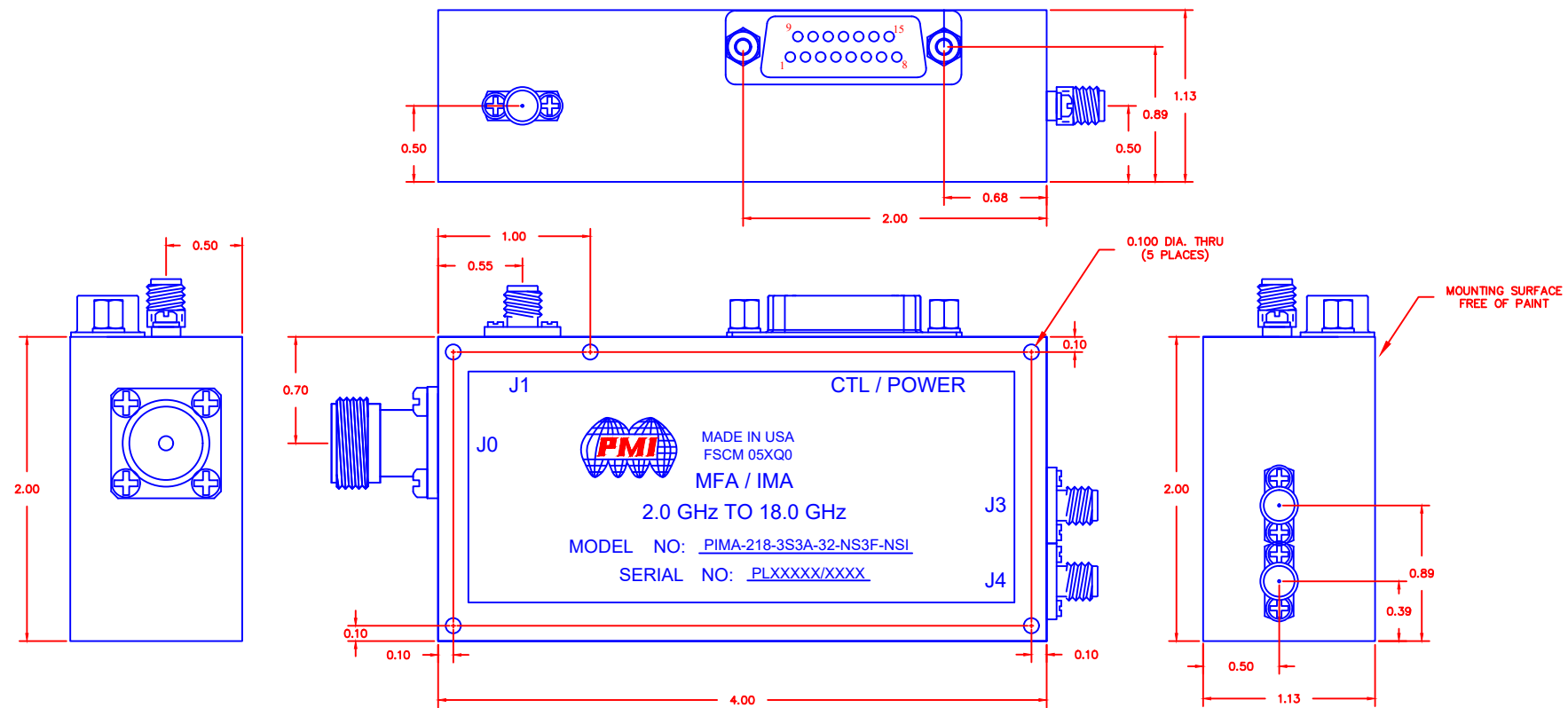
PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-662-5019 FAX: 301-662-1731
WEBSITE: www.pmi-rf.com
E-MAIL: sales@pmi-rf.com
ISO 9001 CERTIFIED

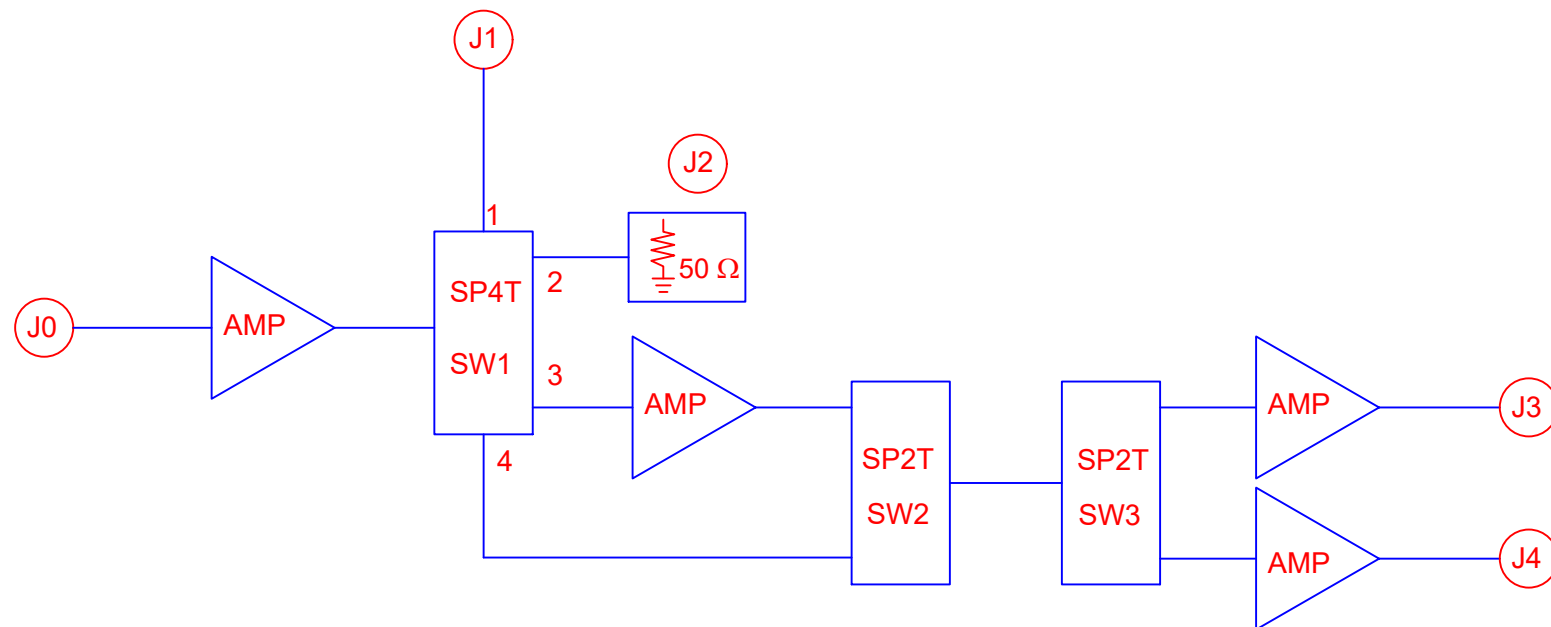


APPROVALS		DATE		TITLE			
DRAWN		1/31/20		PRODUCT FEATURE			
CHECKED				PIMA-218-3S3A-32-NS3F-NSI			
ISSUED				SIZE	FSCM NO.	DWG NO.	REV.
				A	05XQ0	27038120	B2
				SCALE N:S			SHEET 1 OF 2

MECHANICAL OUTLINE



FUNCTIONAL BLOCK DIAGRAM



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TOLERANCES:
X.XX ±0.020
X.XXX ±0.010

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		TITLE			
APPROVALS	DATE	PRODUCT FEATURE			
DRAWN <i>SPH</i>	<i>1/31/20</i>	PIMA-218-3S3A-32-NS3F-NSI			
CHECKED		SIZE A	FSCM NO. 05XQ0	DWG NO. 27038120	REV. B2
ISSUED		SCALE N:S		SHEET 2	OF 2