

# DESCRIPTION:

PMI MODEL PIM-TR-9G10G-16CH-B33M-SFF IS A TRANSMIT / RECEIVE MODULE WHICH UP CONVERTS A 4 GHz IF SIGNAL TO THE 9 TO 10 GHz TRANSMIT FREQUENCY RANGE AND SIMILARLY DOWN CONVERTS A 9 TO 10 GHz RECEIVED SIGNAL TO A 4 GHz IF SIGNAL. SIXTEEN TRANSMIT/RECEIVE CHANNELS ARE AVAILABLE.

# SPECIFICATIONS:

## TRANSMIT PATH

- FREQUENCY RANGE: 9 – 10 GHz
- RF OUTPUT POWER: 8.5 W (+38 dBm) MINIMUM
- PULSE SETTING: 30% DUTY CYCLE
- SPURIOUS: -50 dBc
- IF INPUT FREQUENCY RANGE: 4 GHz
- IF INPUT POWER LEVEL: -15 dBm NOMINAL

## RECEIVE PATH

- FREQUENCY RANGE: 9 – 10 GHz
- RF INPUT POWER: -10 dBm MAX
- SPURIOUS: -50 dBc
- IF OUTPUT FREQUENCY RANGE: 4 GHz
- NOISE FIGURE: 8 dB MAXIMUM

## LO INPUT

- FREQUENCY RANGE: 13 – 14 GHz
- INPUT POWER: +10 dBm NOMINAL

## DIGITAL CONTROL PHASE SHIFTER

- FREQUENCY RANGE: 9 – 10 GHz
- PHASE SHIFT: 354.4° NOMINAL
- LSB: 5.625° NOMINAL (6 BITS)

## DIGITAL CONTROL ATTENUATOR

- FREQUENCY RANGE: 9 – 10 GHz
- ATTENUATION RANGE: 25 dB MINIMUM
- LSB: 1 dB MAXIMUM (5 BITS MINIMUM)

## POWER SUPPLY

- +Vcc: +28V±1V
- -Vcc: -7V±0.5V

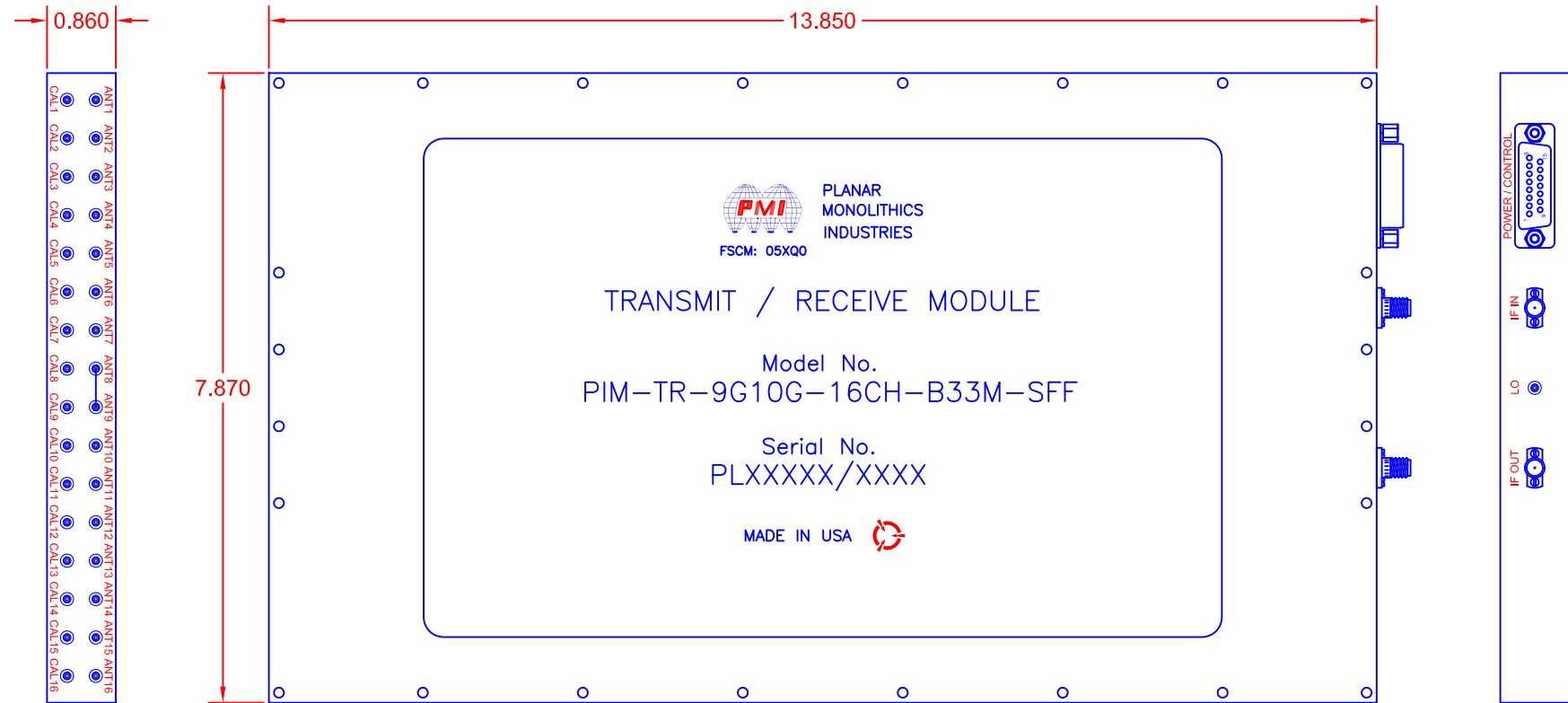
## MECHANICAL

- IF INPUT / OUTPUT CONNECTORS: SMA (F)
- RF TX / RX CONNECTORS: BMA (M)
- LO INPUT CONNECTOR: BMA (M)
- POWER / CONTROL CONNECTOR: 15 PIN D-SUB CONNECTOR (M)
- SIZE: 13.85" (352mm) X 7.87" (200mm) X 0.86" (22mm)
- FINISH: NICKEL PLATED

## ENVIRONMENTAL

- TEMPERATURE RANGE: -20 TO +85°C

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	PRELIMINARY	7/20/16	



POWER / CTL CONNECTOR PIN ASSIGNMENTS	
PIN NUMBER	FUNCTION
1	SPI SCLK
2	SPI MOSI
3	SPI MISO
4	N/C
5	N/C
6	+28 V (+Vcc)
7	+28 V (+Vcc)
8	+28 V (+Vcc)
9	-7 V (-Vcc)
10	-7 V (-Vcc)
11	GND
12	GND
13	GND
14	GND
15	GND

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ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
X.XX ±0.020  
X.XXX ±0.010

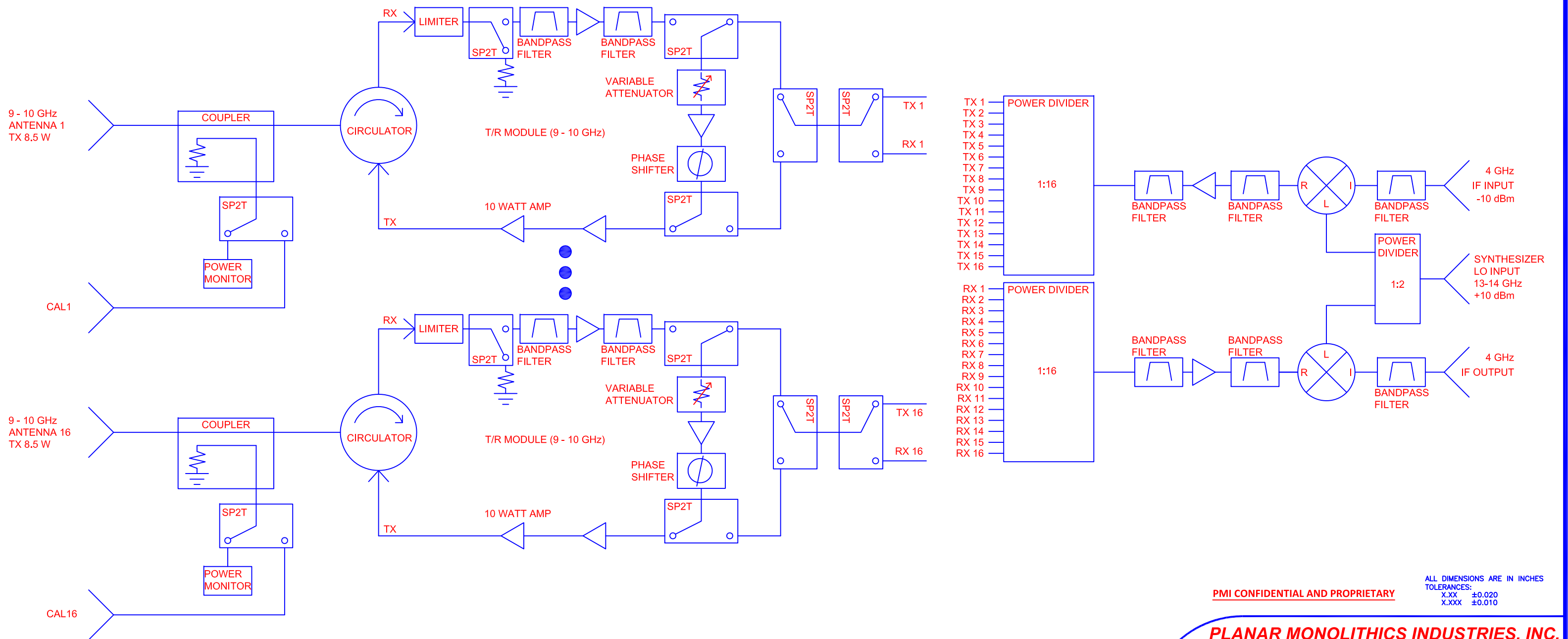
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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE		
DRAWN <i>DPD</i>		7/20/16	PRODUCT FEATURE TX/RX MODULE		
CHECKED			SIZE	FSCM NO.	DWG NO.
ISSUED			B	05XQ0	PRELIMINARY
			SCALE	N:S	SHEET 1 OF 2
					REV. 1

# BLOCK DIAGRAM:

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	PRELIMINARY	7/20/16	



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DRAWN <i>DPD</i>		7/20/16	PRODUCT FEATURE TX/RX MODULE		
CHECKED			SIZE	FSCM NO.	DWG NO.
ISSUED			B	05XQ0	PRELIMINARY
			SCALE	N:S	SHEET 2 OF 2
					REV. 1