

## DESCRIPTION

PMI MODEL NUMBER PDC-42G-1850M-600M-20-292FSF IS A DUAL CHANNEL DOWN CONVERTER MODULE TO PROVIDE AN 1850 MHz  $\pm 300$  MHz IF OUTPUT FROM A 42 GHz  $\pm 300$  MHz INPUT. THIS MODULE PROVIDES A MINIMUM OF 20 dB GAIN WITH A P1dB OF +10 dBm MINIMUM. THE PLO HAS AN INTERNAL REFERENCE AND A LOCK DETECT TTL OUTPUT IS AVAILABLE AT THE D CONNECTOR.

## SPECIFICATIONS

### RF INPUTS

- FREQUENCY: 42 GHz  $\pm 300$  MHz
- INPUT POWER: -10 dBm TYP
- VSWR: 2 : 1 MAX
- NOISE FIGURE: 15 dB MAX
- GAIN: 20 dB MIN
- IMAGE REJECTION: 40 dB MIN
- ISOLATION: ( J1, J2 TO J3 ) 40 dB MIN

### RF OUTPUTS

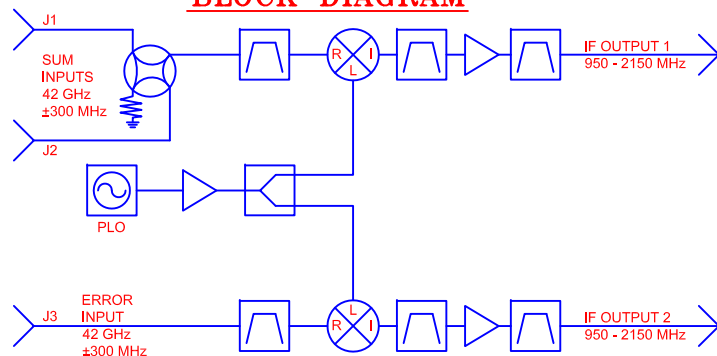
- FREQUENCY: 1850 MHz  $\pm 300$  MHz
- P1dB: +10 dBm MIN
- PHASE STABILITY BETWEEN CHANNELS:  $\pm 5^\circ$  TYP

### INTERNAL LO

- FREQUENCY: 40.15 GHz
- STABILITY:  $\pm 1$  PPM
- CONNECTORS: INPUTS: 2.92 mm F  
OUTPUTS: SMA F  
POWER/CONTROL: 9-PIN D-SUB M
- SW CTL: TTL 0: J1 IN, TTL 1: J2 IN
- POWER SUPPLY: +15V, -5V
- SIZE: 6.00" X 6.00" X 1.50" MAX, GOAL 4.00" X 4.00" X 1.00"
- FINISH: PAINTED BLUE

| PIN | FUNCTION    |
|-----|-------------|
| 1   | GND         |
| 2   | GND         |
| 3   | +15V        |
| 4   | +15V        |
| 5   | GND         |
| 6   | -5V         |
| 7   | GND         |
| 8   | SW CTL      |
| 9   | LOCK DETECT |

## BLOCK DIAGRAM



## ENVIRONMENTAL RATINGS

- TEMPERATURE: 0°C TO +60°C (OPERATING)  
-40°C TO +85°C (STORAGE)

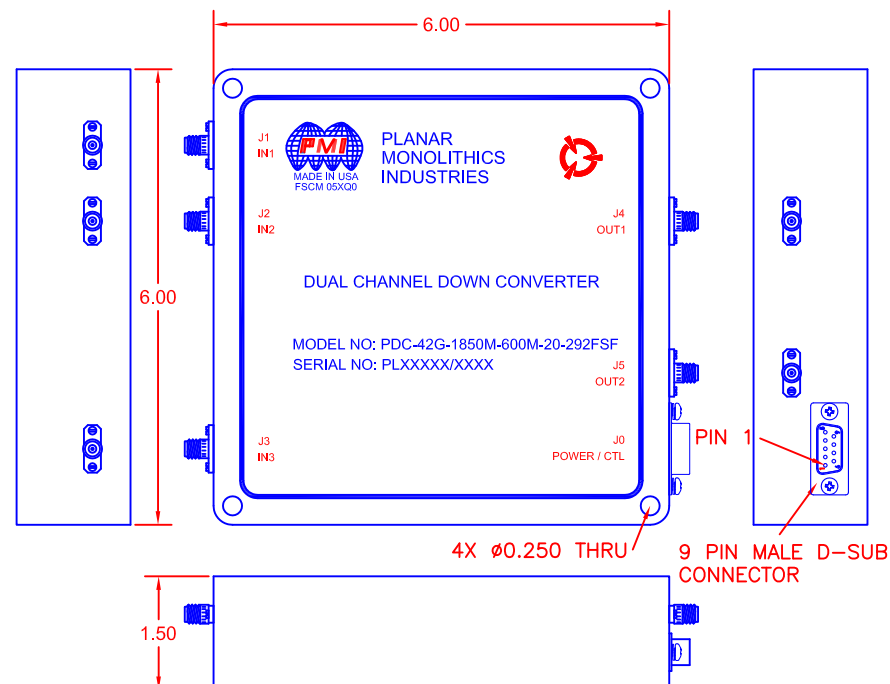
NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE  
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
X.XX  $\pm 0.020$   
X.XXX  $\pm 0.010$

| REVISIONS |      |                 |          |          |
|-----------|------|-----------------|----------|----------|
| ZONE      | REV. | DESCRIPTION     | DATE     | APPROVED |
|           | 1    | PRELIMINARY     | 10/27/17 |          |
|           | 2    | ADDED GOAL SIZE | 11/3/17  |          |

## MECHANICAL OUTLINE

MAX SHOWN, GOAL 4.00" X 4.00" X 1.00"



PMI CONFIDENTIAL AND PROPRIETARY

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| APPROVALS        |  | DATE     |  | TITLE                        |  |
|------------------|--|----------|--|------------------------------|--|
| DRAWN <i>DPD</i> |  | 10/27/17 |  | PRODUCT FEATURE              |  |
| MODIFIED         |  |          |  | PDC-42G-1850M-600M-20-292FSF |  |
| ISSUED           |  |          |  | DUAL CHANNEL DOWN CONVERTER  |  |
| SIZE             |  | FSCM NO. |  | DWG NO.                      |  |
| A                |  | 05XQ0    |  | PRELIMINARY                  |  |
| SCALE            |  | N:S      |  | SHEET                        |  |
|                  |  |          |  | 1 OF 1                       |  |