

## DESCRIPTION

PMI MODEL: 4SFB-DC22G-CD-SFF IS A FOUR CHANNEL SWITCH FILTER BANK THAT OPERATES OVER THE DC TO 22.0 GHz FREQUENCY RANGE. THIS MODEL OFFERS FAST SWITCHING SPEEDS OF LESS THAN 500 ns WHILE MAINTAINING A MAXIMUM INSERTION LOSS OF 7 dB.

## SPECIFICATIONS

- FREQUENCY RANGE: ----- DC TO 22.0 GHz
- INSERTION LOSS: ----- 7 dB MAXIMUM
- ISOLATION: ----- 60 dB MINIMUM
- VSWR: ----- 1.5:1 MAXIMUM CHANNELS 1 TO 3  
2.5:1 MAXIMUM CHANNEL 4
- IMPEDANCE: ----- 50  $\Omega$
- SWITCHING SPEED: ----- 500 ns MAXIMUM  
(FROM 50% TTL TO 90%/10% RF)
- POWER HANDLING: ----- +20 dBm MAXIMUM
- LOGIC INPUT: ----- TTL COMPATIBLE, 4 BITS DECODED  
TTL HIGH = 2 V MINIMUM  
TTL LOW = 0.8 V MAXIMUM
- POWER SUPPLY: ----- +5 VDC @ 150 mA MAXIMUM  
-15 VDC @ 100 mA MAXIMUM
- CONNECTORS: ----- RF: SMA FEMALE (REMOVABLE)  
CONTROL: 9-PIN MICRO-D MALE
- SIZE: ----- 3.00" x 2.60" x 0.75" MAXIMUM  
76.20 mm x 66.04 mm x 19.05 mm MAXIMUM

### FILTER CHARACTERISTICS

| PARAMETER             | FILTER A                             | FILTER B                            | FILTER C                            | FILTER D         |
|-----------------------|--------------------------------------|-------------------------------------|-------------------------------------|------------------|
| PASSBAND, MINIMUM     | DC - 10 GHz                          | 10 - 14 GHz                         | 14 - 18 GHz                         | 18 - 22 GHz      |
| FILTER INSERTION LOSS | 1.0 dB                               | 1.5 dB                              | 1.5 dB                              | 1.0 dB           |
| REJECTION, MINIMUM    | 30 dB @ 13.2 GHz<br>60 dB @ 20.0 GHz | 50 dB @ 6.1 GHz<br>50 dB @ 18.9 GHz | 50 dB @ 9.3 GHz<br>50 dB @ 23.0 GHz | 30 dB @ 16.0 GHz |

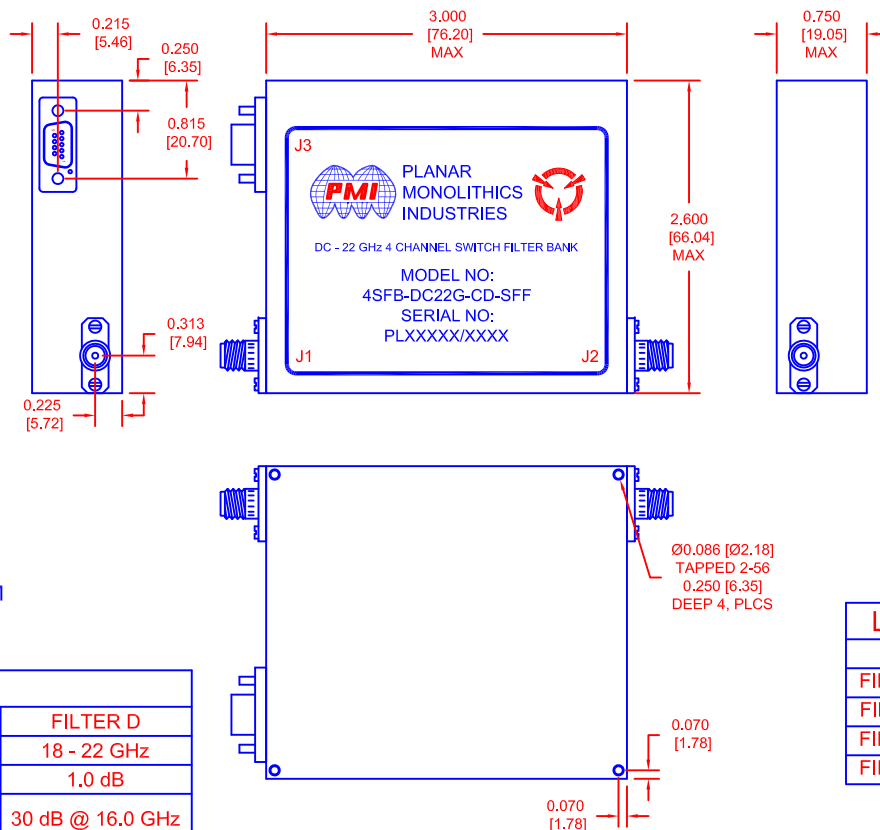
## ENVIRONMENTAL RATINGS

- TEMPERATURE: ----- -40 °C TO +85 °C (OPERATING)  
-65 °C TO +125 °C (STORAGE)
- HUMIDITY: ----- MIL-STD-202, METHOD 103B COND. B
- SHOCK: ----- MIL-STD-202, METHOD 213B COND. B
- VIBRATION: ----- MIL-STD-202, METHOD 204D COND. B
- ALTITUDE: ----- MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE: ----- MIL-STD-202, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

**PMI CONFIDENTIAL AND PROPRIETARY**



### J3 PIN OUT

| PIN | FUNCTION |
|-----|----------|
| 1   | +5 V     |
| 2   | GND      |
| 3   | -15 V    |
| 4   | GND      |
| 5   | N/C      |
| 6   | TTL1     |
| 7   | TTL2     |
| 8   | TTL3     |
| 9   | TTL4     |

### LOGIC TABLE

| PIN      | 9 | 8 | 7 | 6 |
|----------|---|---|---|---|
| FILTER A | 1 | 1 | 1 | 0 |
| FILTER B | 1 | 1 | 0 | 1 |
| FILTER C | 1 | 0 | 1 | 1 |
| FILTER D | 0 | 1 | 1 | 1 |

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ISO 9001 CERTIFIED



| APPROVALS |  | DATE     |  | TITLE    |  | PRODUCT FEATURE |  | DC to 22 GHz 4 Channel Switch Filter Bank |  |
|-----------|--|----------|--|----------|--|-----------------|--|-------------------------------------------|--|
| DRAWN     |  | M. Berry |  | 08/15/16 |  | SIZE            |  | FSCM NO.                                  |  |
| CHECKED   |  |          |  |          |  | A               |  | 05XQ0                                     |  |
| ISSUED    |  |          |  |          |  | SCALE           |  | N:S                                       |  |
|           |  |          |  |          |  | DWG NO.         |  | PRELIMINARY                               |  |
|           |  |          |  |          |  | SHEET           |  | 1 OF 1                                    |  |