

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	12/22/14	
	B1	ECN# 15-0015	2/11/15	

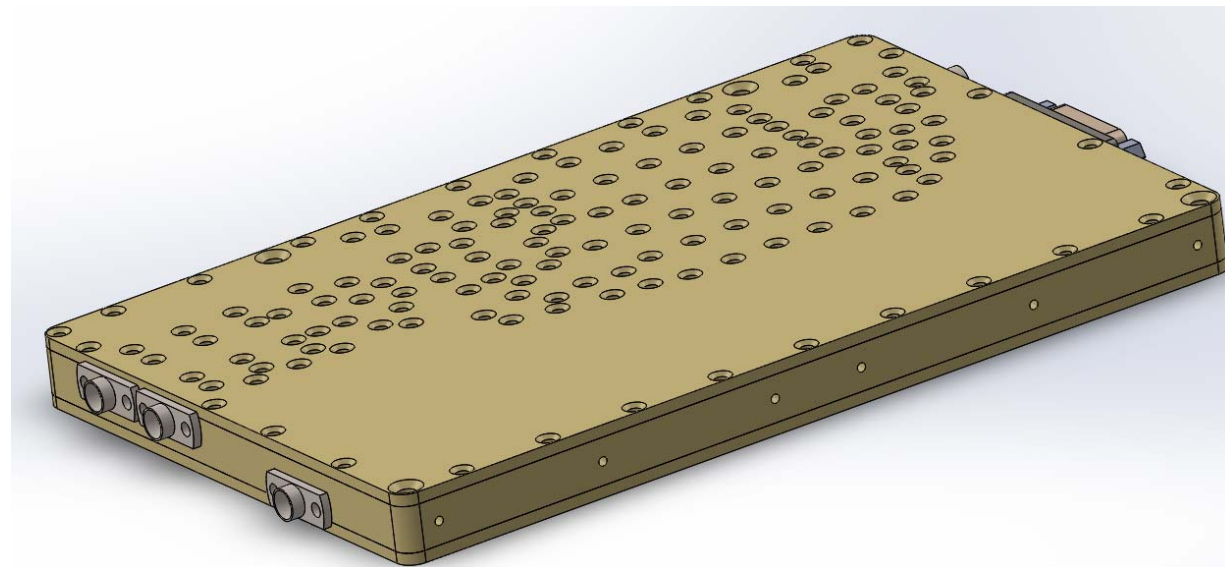
**DESCRIPTION:**

PMI MODEL NUMBER 6SFB-CC-100M18G-MAH-RX-TX IS AN INTEGRATED MODULE CONTAINING TWO 6-CHANNEL SWITCHED FILTER BANKS COVERING 100 MHz TO 18 GHz. A RECEIVE SWITCHED FILTER BANK HAS 2 INPUTS, ONE WITH 18 dB GAIN AND ONE WITH 10 dB INSERTION LOSS. THE ABSORPTIVE INPUT SWITCH HAS 100 dB ISOLATION BETWEEN THE 2 INPUTS. A TRANSMIT SWITCHED FILTER BANK HAS 32 dB TYPICAL GAIN WHILE ALLOWING 1 OF 6 FILTER PATHS TO BE CHOSEN. BOTH FILTER BANKS CAN BE USED SIMULTANEOUSLY IN DIFFERENT BANDS. THE UNIT MEASURES ONLY 4.80" X 3.08" X 0.365".

**SPECIFICATIONS:**

- **INPUTS:** J1, J5, J7
- **J1 INPUT:** RF RECEIVE INPUT  
FREQUENCY: 100 MHz TO 18.0 GHz  
POWER LEVEL: -80 dBm TO -10 dBm
- **J5 INPUT:** RF TRANSMIT INPUT  
FREQUENCY: 100 MHz TO 18.0 GHz  
POWER LEVEL: -15 dBm TO -20 dBm TYPICAL
- **J7 INPUT:** RF BUILT-IN-TEST (BIT) RECEIVE INPUT  
FREQUENCY: 100 MHz TO 18.0 GHz  
POWER LEVEL: -15 dBm TO -20 dBm TYPICAL
- **OUTPUTS:** J2, J6
- **J2 OUTPUT:** RF RECEIVE OUTPUT  
FREQUENCY: 100 MHz TO 18.0 GHz  
POWER LEVEL: -62 dBm TO +8 dBm TYPICAL
- **J6 OUTPUT:** RF TRANSMIT OUTPUT  
FREQUENCY: 100 MHz TO 18.0 GHz  
POWER LEVEL: 0 dBm TO +10 dBm TYPICAL

- **CONTROL LOGIC:** TTL ('0': 0 - 0.8 VOLTS), ('1' 2 - 5 VOLTS)
- **TTL 1:** RECEIVE FILTER BANK INPUT SELECT  
0: RX INPUT (J1)  
1: RX BUILT-IN-TEST INPUT (J7)
- **TTL 2:** RECEIVE FILTER SELECT  
000: THRU CHANNEL  
001: CHANNEL 1  
010: CHANNEL 2  
011: CHANNEL 3  
100: CHANNEL 4  
101: CHANNEL 5  
110: NOT DEFINED  
111: NOT DEFINED
- **TTL 8:** TRANSMIT FILTER SELECT  
000: THRU CHANNEL  
001: CHANNEL 1  
010: CHANNEL 2  
011: CHANNEL 3  
100: CHANNEL 4  
101: CHANNEL 5  
110: NOT DEFINED  
111: NOT DEFINED
- **POWER SUPPLIES:**  
+12V: 600 mA MAX  
+5V: 550 mA MAX  
+3.3V: 0 mA \*NOT NEEDED  
-12V: 300 mA MAX
- **SIZE:** 4.80" x 3.08" x 0.365"
- **RF CONNECTORS:** SMPM (F)
- **FINISH:** GOLD PLATED



**RECEIVE SWITCHED FILTER BANK:**

- J1 PATH GAIN: 18 dB TYPICAL
- J7 PATH INSERTION LOSS: 10 dB TYPICAL
- ISOLATION: J1, J7 100 dB

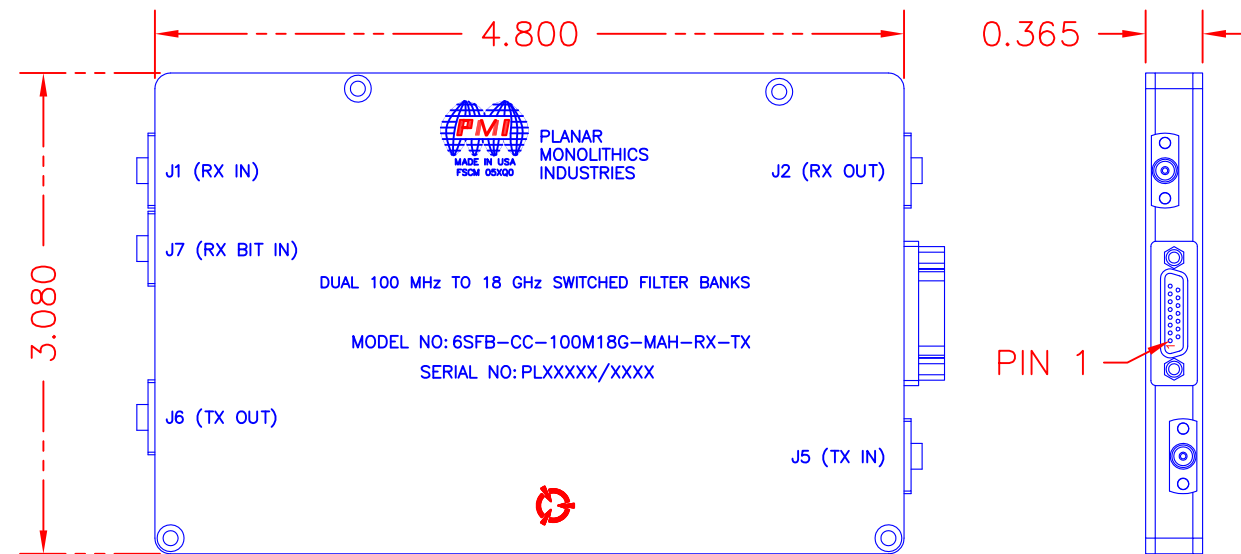
**TRANSMIT SWITCHED FILTER BANK:**

- GAIN: 32 dB TYPICAL

**RECEIVE AND TRANSMIT SWITCHED FILTER BANKS:**

- VSWR OVER 90% PASSBAND: 2 : 1 MAX
- SWITCHING SPEED: 100 ns TYPICAL
- THRU CHANNEL PASSBAND: 100 MHz TO 18 GHz
- CHANNEL 1 CENTER FREQUENCY: 3400 MHz  
3 dB BANDWIDTH: 2000 MHz  
REJECTION: -40 dBc TYP 100 MHz - 2 GHz, -30 dBc MIN  
-40 dBc TYP 4.8 GHz - 18 GHz, -30 dBc MIN
- CHANNEL 2 CENTER FREQUENCY: 5400 MHz  
3 dB BANDWIDTH: 2000 MHz  
REJECTION: -40 dBc TYP 100 MHz - 4 GHz, -30 dBc MIN  
-40 dBc TYP 6.8 GHz - 18 GHz, -30 dBc MIN
- CHANNEL 3 CENTER FREQUENCY: 7400 MHz  
3 dB BANDWIDTH: 2000 MHz  
REJECTION: -40 dBc TYP 100 MHz - 6 GHz, -30 dBc MIN  
-40 dBc TYP 8.8 GHz - 18 GHz, -30 dBc MIN
- CHANNEL 4 CENTER FREQUENCY: 9400 MHz  
3 dB BANDWIDTH: 2000 MHz  
REJECTION: -40 dBc TYP 100 MHz - 8 GHz, -30 dBc MIN  
-40 dBc TYP 10.8 GHz - 18 GHz, -30 dBc MIN
- CHANNEL 5 CENTER FREQUENCY: 11400 MHz  
3 dB BANDWIDTH: 2000 MHz  
REJECTION: -40 dBc TYP 100 MHz - 10 GHz, -30 dBc MIN  
-40 dBc TYP 12.8 GHz - 18 GHz, -30 dBc MIN

PIN	FUNCTION
1	TTL1
2	TTL2A (LSB)
3	TTL2B
4	TTL2C
5	TTL8A (LSB)
6	TTL8B
7	TTL8C
8	GND
9	+12V
10	GND
11	+5V
12	GND
13	+3.3V
14	GND
15	-12V



**NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION**

**PMI CONFIDENTIAL AND PROPRIETARY**

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

**PLANAR MONOLITHICS INDUSTRIES, INC.**

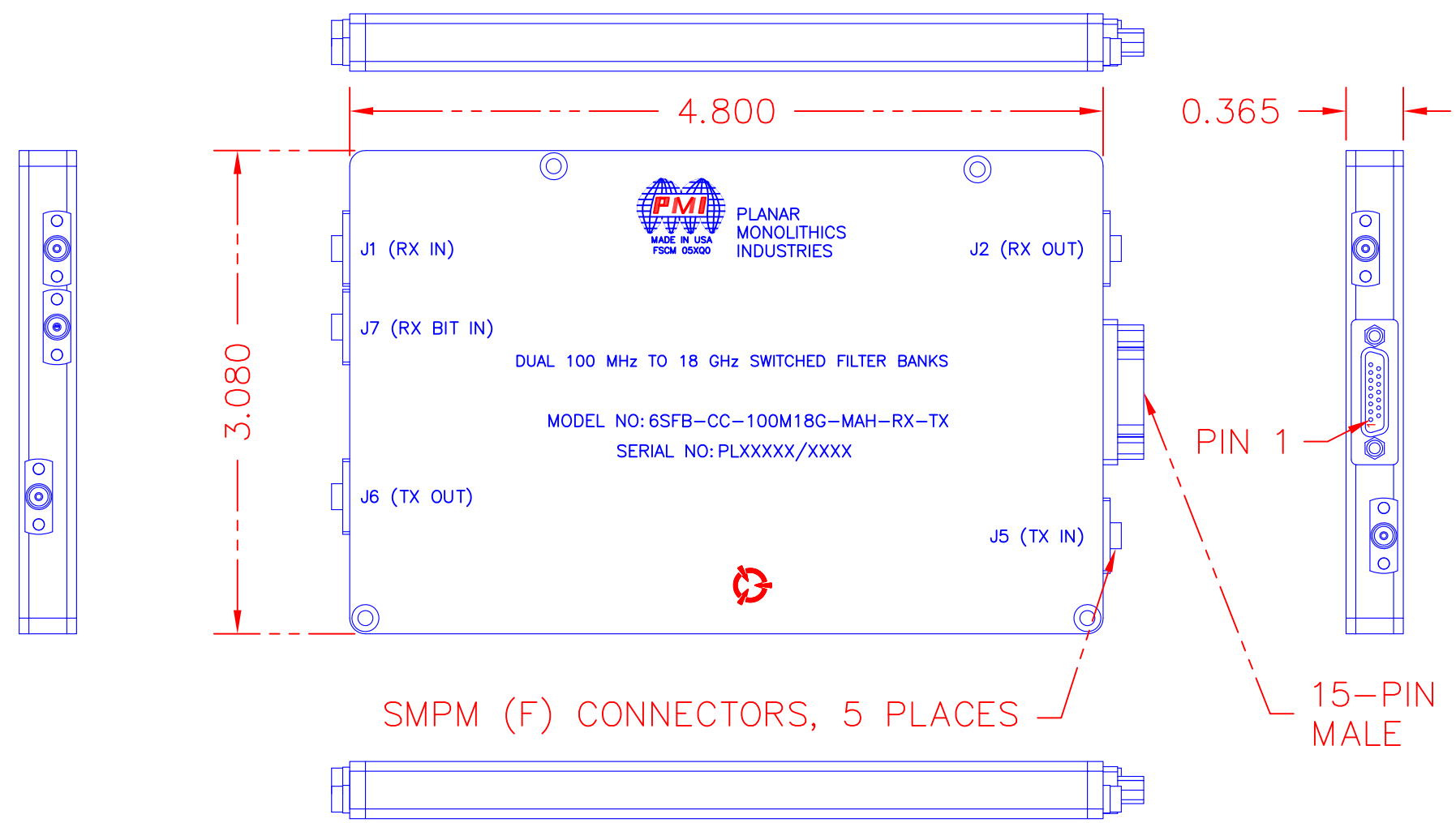
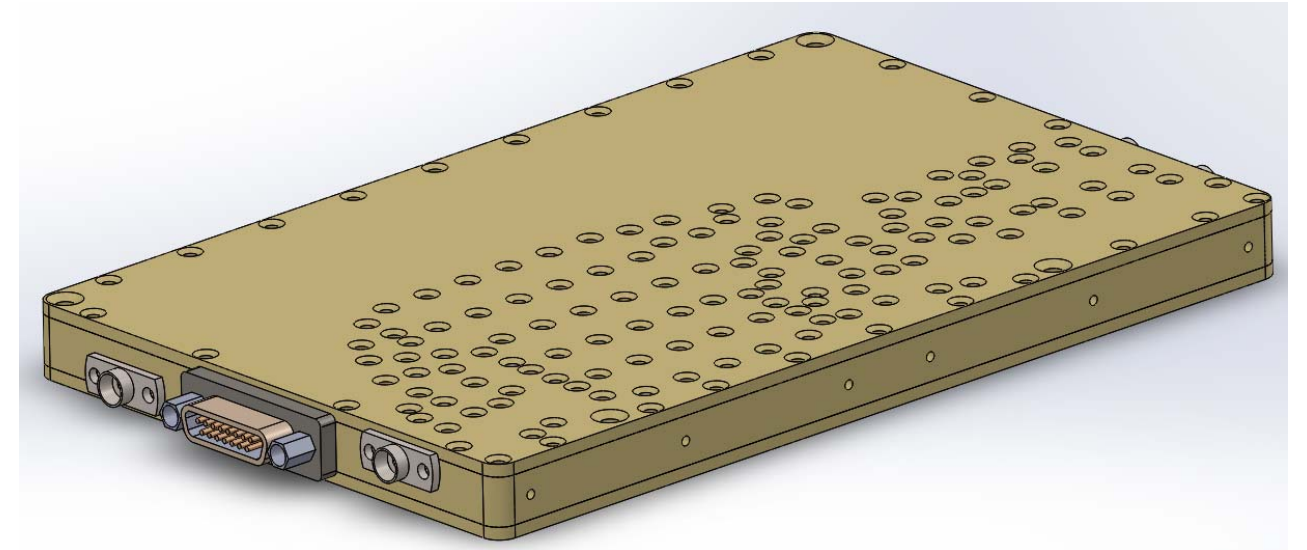
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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE		
DRAWN <i>DPD</i>		12/18/19	PRODUCT FEATURE		
CHECKED			6SFB-CC-100M18G-MAH-RX-TX		
ISSUED	SIZE	FSCM NO.	DWG NO.	REV.	
	B	05XQ0	27024320	B1	
SCALE N:S			SHEET 1 OF 3		

# MECHANICAL OUTLINE:

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	12/22/14	
	B1	ECN# 15-0015	2/11/15	



DUAL 100 MHz TO 18 GHz SWITCHED FILTER BANKS

MODEL NO: 6SFB-CC-100M18G-MAH-RX-TX

SERIAL NO: PLXXXXX/XXXX

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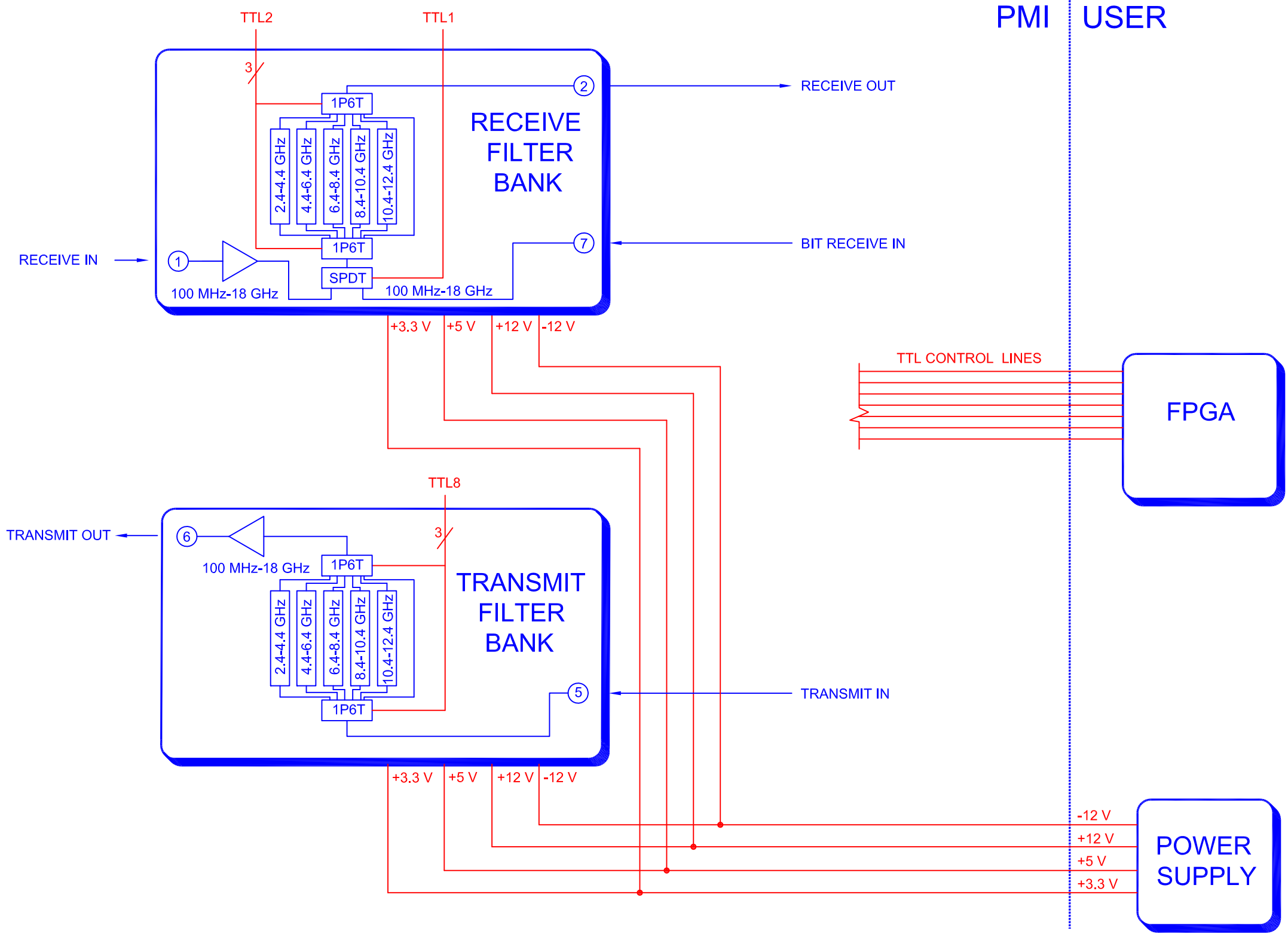
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APPROVALS		DATE	TITLE		
DRAWN <i>DPD</i>		1/2/14	PRODUCT FEATURE		
CHECKED			6SFB-CC-100M18G-MAH-RX-TX		
ISSUED			SIZE	FSCM NO.	DWG NO.
			B	05XQ0	27024320
			SCALE	N:S	SHEET 2 OF 3
					REV. B1

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**BLOCK DIAGRAM:**

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 X.XX ±0.020  
 X.XXX ±0.010

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DRAWN	DPD	1/2/14	PRODUCT FEATURE 6SF8-CC-100M18G-MAH-RX-TX		
CHECKED			SIZE	FSCM NO.	DWG NO.
ISSUED			B	05XQ0	27024320
			SCALE	N:S	SHEET 3 OF 3
			REV.	B1	