

DESCRIPTION:

PMI MODEL 4SFB-6G18G-BR-SFF IS A FOUR INDEPENDENT CHANNEL SWITCHED NOTCH FILTER BANK WITH EACH CHANNEL CONTAINING A BAND STOP FILTER AND SWITCHED RF BYPASS. OVERALL PASSBAND IS 6.0 TO 18.0 GHz. THE FOUR FILTERS ARE IDENTICAL AND ARE GANG SWITCHED BY A SINGLE CONTROL LINE. MAXIMUM INPUT POWER IS +24 dBm AND INPUT P1dB POINT IS +18 dBm.

SPECIFICATIONS:

- FREQUENCY RANGE: 6000 MHz TO 18000 MHz
- INSERTION LOSS (BYPASS): 1.0 dB MIN, 3.0 dB MAX, 1.5 dB PK-PK, 6.0 - 7.3 GHz
1.5 dB MIN, 4.0 dB MAX, 2.0 dB PK-PK, 9.0 - 18.0 GHz
- CHANNEL - CHANNEL ISOLATION: 60 dB MIN
- SWITCHING TRANSIENTS: <-60 dBm ABOVE 2.0 GHz INTO BROADBAND DETECTOR WITH 20 MHz VIDEO BANDWIDTH
- VSWR: 2.0:1 MAX (BYPASSED); 6.0 TO 7.3 GHz AND 9.0 TO 18.0 GHz, 2:1 MAX, 7.3 TO 9.0 GHz N/A (FILTER ENABLED)
- IMPEDANCE: 50 OHMS
- SWITCHING SPEED FROM 50% CTRL: 100 nsec MAX TO WITHIN 0.5 dB OF FINAL AMPLITUDE VALUE
100 nsec MAX TO WITHIN 5° FINAL PHASE VALUE
- INPUT IP3: +28 dBm MIN
- INPUT P1dB: +18 dBm MIN
- MAX INPUT POWERL: +24 dBm NO DAMAGE
- SPURIOUS OUTPUTS: -80 dBm MAX NOT INCLUDING SWITCHING TRANSIENTS
- CONTROL: LSTTL, 1 LINE (SEE TABLE FOR A0 PIN OUTS)
LOGIC 0: 0.8 V MAX, -0.4 mA MAX
LOGIC 1: 2.0 V MIN, 20 uA MAX
OPEN CIRCUIT: GUARANTEED LOGIC 1
- POWER SUPPLY: +12VDC (+11.4 TO +14.0V); 400mA max.
-12VDC (-11.4 TO -14.0V); 200mA max.
- CONNECTOR: RF - SMA FEMALE (REMOVABLE)
CONTROL - M83513/02-BN (15 SOCKET MICRO-D WITH #2-56 JACKPOSTS)
- SIZE: 4.5" (L) X 3.6" (W) X 1.0" (H)
- FINISH: BLUE EPOXY POLIMIDE COATING IAW MIL-C-22750 TYPE 1 OVER
EPOXY POLIMIDE PRIMER IAW MIL-P-23377 TYPE 1, CLASS 1 OR 3
- WEIGHT: 16 oz MAX
- SEALING: HERMETIC
- MTBF: >150,000 HOURS CALCULATED IAW MIL-HDBK-271 FOR NAVAL SHELTERED AT 50° C

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

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	—	PRELIMINARY	3/3/15	JS/DD

FILTER LOSS CHARACTERISTICS			
PARAMETER	6.0 TO 7.3 GHz	7.8 TO 8.4 GHz	9.0 TO 18.0 GHz
INSERTION LOSS	1 dB MIN, 3 dB MAX	60 dB MIN	1.5 dB MIN, 4.0 dB MAX
FLATNESS	1.5 dB PK-PK	N/A	2.0 dB PK-PK

PHASE DIFFERENCE (FILTER BYPASSED/FILTER ENABLED)			
PARAMETER	6.0 TO 7.3 GHz	7.3 TO 9.0 GHz	9.0 TO 18.0 GHz
PHASE DIFFERENCE	5° MAX	N/A	10° MAX

CTRL A0	FILTER PATH
0	FILTERS ENABLED
1	FILTERS BYPASSED

PLANAR MONOLITHICS INDUSTRIES, INC.

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ISO 9001:2008 CERTIFIED

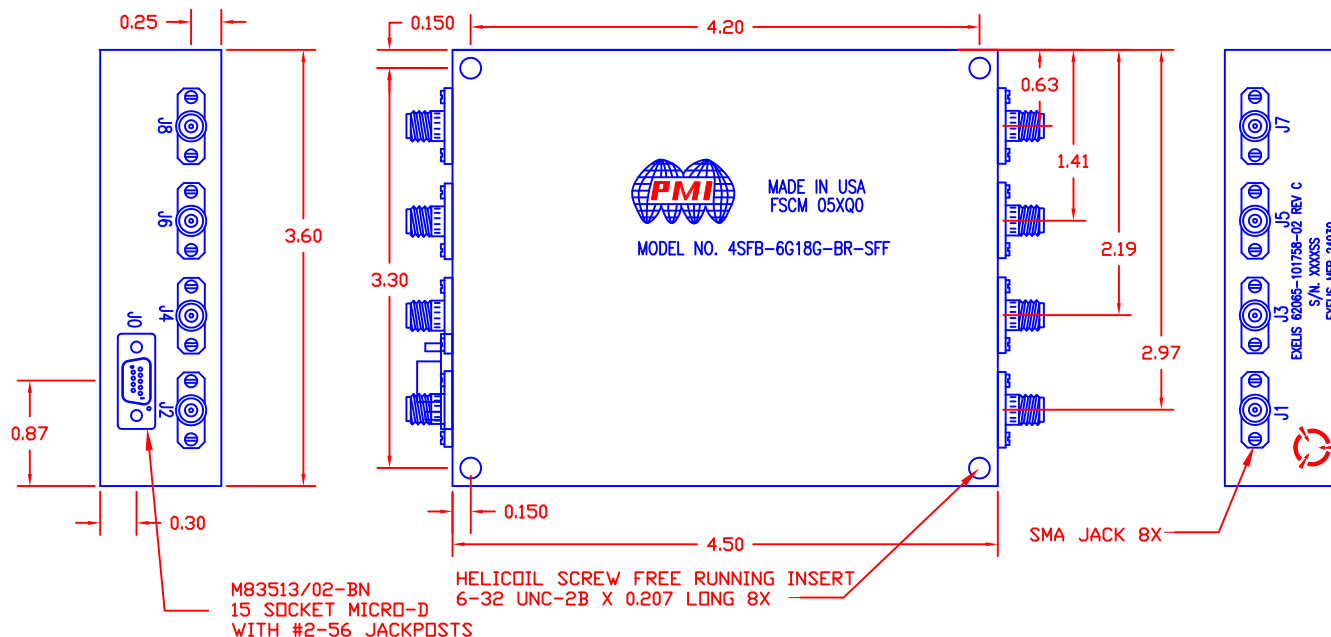


APPROVALS		DATE	TITLE			
DRAWN		3-5-15	PRODUCT FEATURE 4SFB-6G18G-BR-SFF			
CHECKED			SIZE	FSCM NO.	DWG NO.	REV.
ISSUED			A	71A34	PRELIMINARY	—
			SCALE N: S		SHEET 1 OF 4	

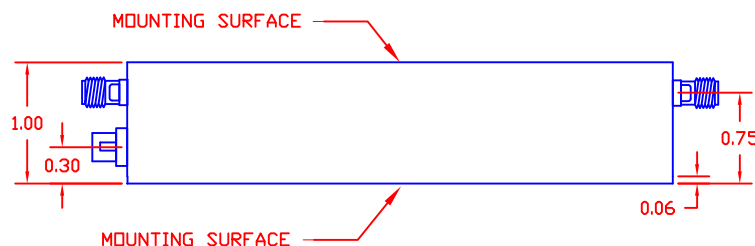
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J0 PIN OUT	
PIN	FUNCTION
1	SHIELD GND
2	A1 SPARE
3	A3 SPARE
4	N/C
5	+12VDC
6	+12VDC RTN
7	-12VDC
8	-12VDC RTN
9	A0
10	A2 SPARE
11	N/C
12	+12VDC
13	+12VDC RTN
14	-12VDC
15	-12VDC RTN



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ENVIRONMENTAL RATINGS:

- TEMPERATURE: · · · -30°C TO +75°C (OPERATING) PER MIL-STD-810, METHOD 502.4, PROCEDURE II FOR LOW TEMPERATURE, 501.4 PROCEDURE II FOR HIGH TEMPERATURE
-54°C TO +85°C (STORAGE) PER MIL-STD-810, METHOD 502.4 PROCEDURE I FOR LOW TEMPERATURE AND 501.4, PROCEDURE I FOR HIGH TEMPERATURE
- HUMIDITY: · · · · MIL-STD-810, METHOD 507.4 TO 100% R.H., +30 TO +60° C WITH CONDENSATION PER METHOD 507.4, 5 CYCLES
- SHOCK: · · · · THE UNIT SHALL PROVIDE SPECIFIED OPERATIONAL PERFORMANCE AFTER BEING SUBJECTED TO SHOCK LEVEL OF 80G, 10ms IN OPERATING OR NON-OPERATING
CONDITION WHEN TESTED IN ACCORDANCE WITH MIL-S-901D, GRADE A
- VIBRATION: · · · · RANDOM - 0.30 G²/Hz FROM 15 Hz TO 2000 Hz, DECREASING AT 6 dB PER OCTAVE STARTING AT 66 Hz PER MIL-STD-810, METHOD 514.5, TABLE II AND FIGURE 9
AND 516.5, TABLE 1

SINUSOIDAL - 0.2" DOUBLE AMPLITUDE FROM 5-14 Hz, 2G FROM 14 TO 33 Hz
- ALTITUDE: · · · · MIL-STD-810, METHOD 500.4 PROCEDURE 1, SEA LEVEL TO 11,000 FEET (OPERATING) AND SEA LEVEL TO 36,000 FEET (NON-OPERATING)
- EXPLOSIVE ATMOSPHERE: · MIL-STD-810, METHOD 511.4 PROC. 1, OPERATE WITHOUT IGNITING THE EXPLOSIVE ENVIRONMENT
- FUNGUS: · · · · NO FUNGUS NUTRIENT MATERIALS TO BE USED IN THE DESIGN
- SALT FOG: · · · · MIL-STD-810, METHOD 509.4, 96 HOUR EXPOSURE

RFI/EMI SPECIFICATIONS:

- LEAKAGE: · · · · WITH +10 dBm RF INPUT AND OUTPUTS TERMINATED INTO 50 OHMS, RF LEAKAGE SHALL NOT EXCEED -60 dBm
- DETECTION: · · · · LEAKAGE SHALL BE TESTED PER EXELIS PROCEDURE 126012

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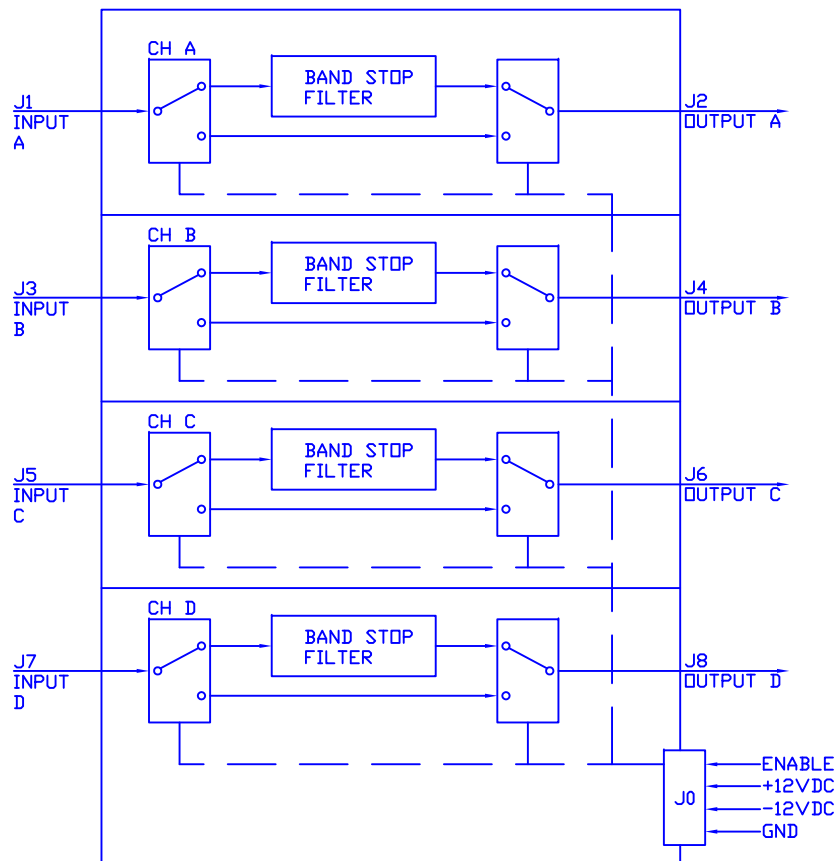


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BLOCK DIAGRAM



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