

DESCRIPTION

PMI MODEL: 8SFB-9R8G18R1G-CD-12-SFF IS AN EIGHT CHANNEL SWITCHED FILTER BANK OFFERING ULTRA FAST SWITCHING SPEED AND HIGH REJECTION WITH LOW LOSS.

SPECIFICATIONS

- IMPEDANCE: ----- 50 Ω
- INSERTION LOSS: ----- 7.2 dB MAXIMUM @ CENTER FREQUENCIES
10.2 dB MAXIMUM @ C.F. $\pm$ 540 MHz
- GAIN FLATNESS: ----- $\pm$ 2.5 dB MAXIMUM BETWEEN CHANNELS
- NOISE FIGURE: ----- 7.2 dB MAXIMUM @ CENTER FREQUENCIES
- INPUT VSWR: ----- 1.8:1 MAXIMUM*
- OUTPUT VSWR: ----- 1.8:1 MAXIMUM*
- HARMONICS LEVEL: ----- 60 dBc MINIMUM @ MAXIMUM POWER FOR ALL CHANNELS
- SPURIOUS LEVEL: ----- 60 dBc MINIMUM @ MAXIMUM POWER FOR ALL CHANNELS
- DC SUPPLIES: ----- +5 VDC
+12 VDC
-12 VDC
- SWITCHING SPEED: ----- 200 ns MAXIMUM
50 ns TYPICAL (50% TTL TO 10%/90% RF)
- MAXIMUM INPUT POWER: ----- +20 dBm CW MAXIMUM
- PHASE SHIFT VS TEMPERATURE: ----- TBD
- PHASE SHIFT VS INPUT POWER: ----- 0° GOAL (TBD) FROM MAX POWER TO -50 dBm
- BANDWIDTH SHIFT VS TEMPERATURE: - TBD
- VIDEO LEAKAGE: ----- -75 dBm
- IN BAND RIPPLE: ----- $\pm$ 1.5 dB
- MEAN TIME BETWEEN FAILURES: ----- 140,000 HOURS GOAL
- CONNECTORS: ----- RF: SMA FEMALE
DC & CONTROL: 15 PIN MICRO-D (MALE)
- WEIGHT: ----- 300 $\pm$ 50 g [10.6 $\pm$ 1.7 oz] GOAL
- SIZE: ----- 100 mm GOAL x 90 mm GOAL x 15 mm MAXIMUM
3.94" GOAL x 3.54" GOAL x 0.59" MAXIMUM
- FINISH: ----- BLUE EPOXY POLIMIDE COATING
IAW MIL-C-22750, TYPE I OVER
EPOXY POLIMIDE PRIMER IAW
MIL-P-23377, TYPE I, CLASS 1 OR 3.

* = TARGET IS 1.6:1 OVER A BANDWIDTH OF 1080 MHz MINIMUM

ENVIRONMENTAL RATINGS

- TEMPERATURE: ----- -55 °C TO +85 °C (OPERATING)
- HUMIDITY: ----- 30% TO 85% RELATIVE HUMIDITY
- VIBRATION: ----- MIL-STD-810G REV 1

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

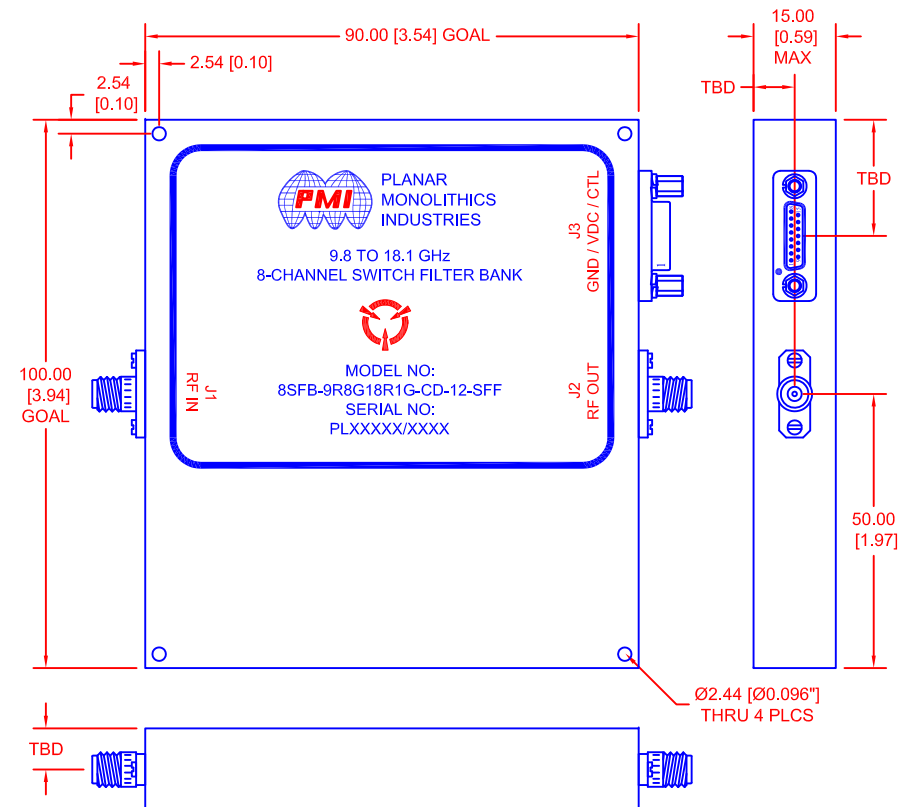
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

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ALL DIMENSIONS
ARE IN mm [INCH]
TOLERANCES:
X.XX $\pm$ 0.508 [0.020]
X.XXX $\pm$ 0.254 [0.010]

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	PRELIMINARY	07/11/16	
	1	SPECIFICATION UPDATE	07/28/16	

MECHANICAL OUTLINE



PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD

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ISO 9001 CERTIFIED



APPROVALS		DATE		TITLE		
DRAWN		M. Berry		07/11/16		
CHECKED						
ISSUED						
SIZE		FSCM NO.		DWG NO.		REV.
A		05XQ0		PRELIMINARY		1
SCALE		N:S		SHEET		1 OF 2

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FILTER CHARACTERISTICS

	LOW FREQUENCY AT 3 dBc ATTENUATION	HIGH FREQUENCY AT 3 dBc ATTENUATION	IN-BAND RIPPLE	LOW FREQUENCY AT 30 dBc ATTENUATION	HIGH FREQUENCY AT 30 dBc ATTENUATION	LOW FREQUENCY AT 60 dBc ATTENUATION	HIGH FREQUENCY AT 60 dBc ATTENUATION	OUT OF BAND REJECTION
BPF1	9790 MHz	10870 MHz	± 1.5 dB	9250 MHz	11440 MHz	8800 MHz	11800 MHz	60 dB
BPF2	10830 MHz	11910 MHz	± 1.5 dB	10150 MHz	12530 MHz	9750 MHz	12950 MHz	60 dB
BPF 3	11850 MHz	12930 MHz	± 1.5 dB	11110 MHz	13610 MHz	10700 MHz	14100 MHz	60 dB
BPF 4	12890 MHz	13970 MHz	± 1.5 dB	12090 MHz	14710 MHz	11650 MHz	15250 MHz	60 dB
BPF 5	13930 MHz	15010 MHz	± 1.5 dB	13060 MHz	15810 MHz	12600 MHz	16400 MHz	60 dB
BPF 6	14970 MHz	16050 MHz	± 1.5 dB	14040 MHz	16910 MHz	13550 MHz	17550 MHz	60 dB
BPF 7	15990 MHz	17070 MHz	± 1.5 dB	14990 MHz	17980 MHz	14500 MHz	18700 MHz	60 dB
BPF8	17030 MHz	18110 MHz	± 1.5 dB	15970 MHz	19060 MHz	15450 MHz	19800 MHz	60 dB

J3 CONNECTOR DETAIL

PIN	FUNCTION
1	CTL 1
2	CTL 2
3	CTL 3
4	CTL 4
5	CTL 5
6	CTL 6
7	CTL 7
8	CTL 8
9	GND
10	+5 VDC
11	GND
12	+12 VDC
13	GND
14	-12 VDC
15	GND

LOGIC TABLE

	FILTER 1	FILTER 2	FILTER 3	FILTER 4	FILTER 5	FILTER 6	FILTER 7	FILTER 8
TTL CONTROL 1	1	0	0	0	0	0	0	0
TTL CONTROL 2	0	1	0	0	0	0	0	0
TTL CONTROL 3	0	0	1	0	0	0	0	0
TTL CONTROL 4	0	0	0	1	0	0	0	0
TTL CONTROL 5	0	0	0	0	1	0	0	0
TTL CONTROL 6	0	0	0	0	0	1	0	0
TTL CONTROL 7	0	0	0	0	0	0	1	0
TTL CONTROL 8	0	0	0	0	0	0	0	1

NOTES:

- 3 dB BANDWIDTH FOR ALL CHANNELS: 1040 MHz MINIMUM, 1080 MHz GOAL, 1120 MHz MAXIMUM
- AMPLITUDE FLATNESS VS CENTER FREQUENCY:
 - 1.5 dB MAXIMUM (1.0 dB GOAL) @ CF ± 250 MHz
 - 2 dB MAXIMUM (1.5 dB GOAL) @ CF ± 400 MHz
 - 3 dB MAXIMUM @ CF ± 540 MHz

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