

## DESCRIPTION

PMI MODEL RFE-218-70-BB OPTION: JT IS A 2 TO 18 GHz HIGH SENSITIVITY AND HIGH DYNAMIC RANGE DIRECTION FINDING (DF) RECEIVER FRONT END CONSISTING OF THREE POWER DIVIDERS, SIX LIMITERS, ONE LOW NOISE 15 dB GAIN PET AMPLIFIER, AND TWO AMC 70 dB EXTENDED DYNAMIC RANGE DETECTOR LOG VIDEO AMPLIFIERS (ERDLVA) INTEGRATED IN A MINIATURE ASSEMBLY.

## SPECIFICATIONS

- FREQUENCY RANGE (J1, J2, J3): 2 TO 18 GHz
- FREQUENCY FLATNESS (J4, J5):  $\pm 3.0$  dB MAXIMUM
- TSS (J4, J5): -63 dBm MINIMUM
- VSWR (J2, J3): 3.0:1 MAXIMUM
- DYNAMIC RANGE (J4, J5): -60 TO +5 dBm MINIMUM
- LOG LINEARITY (J4, J5):  $\pm 2.25$  dB MAXIMUM
- LOG SLOPE (J4, J5): 50 mV/dB ( $\pm 10\%$ )
- TEMPERATURE STABILITY (J4, J5):  $\pm 2$  dB MAXIMUM (-10°C TO +85°C)
- RISE TIME (J4, J5): 30 nSec MAXIMUM
- RECOVERY TIME (J4, J5): 350 nSec MAXIMUM
- VIDEO LOAD (J4, J5): 93 OHMS (RECOMMENDED)
- ISOLATION (J2 TO J3): 24 dB MINIMUM
- GAIN: J2 TO J1 AND J3 TO J1  
+3 dB TYPICAL
- DC POWER:
  - +V: 9V TO 12V @ 850 mA MAXIMUM (WITH NO RF INPUT)
  - V: 9V TO 12V @ 300 mA MAXIMUM

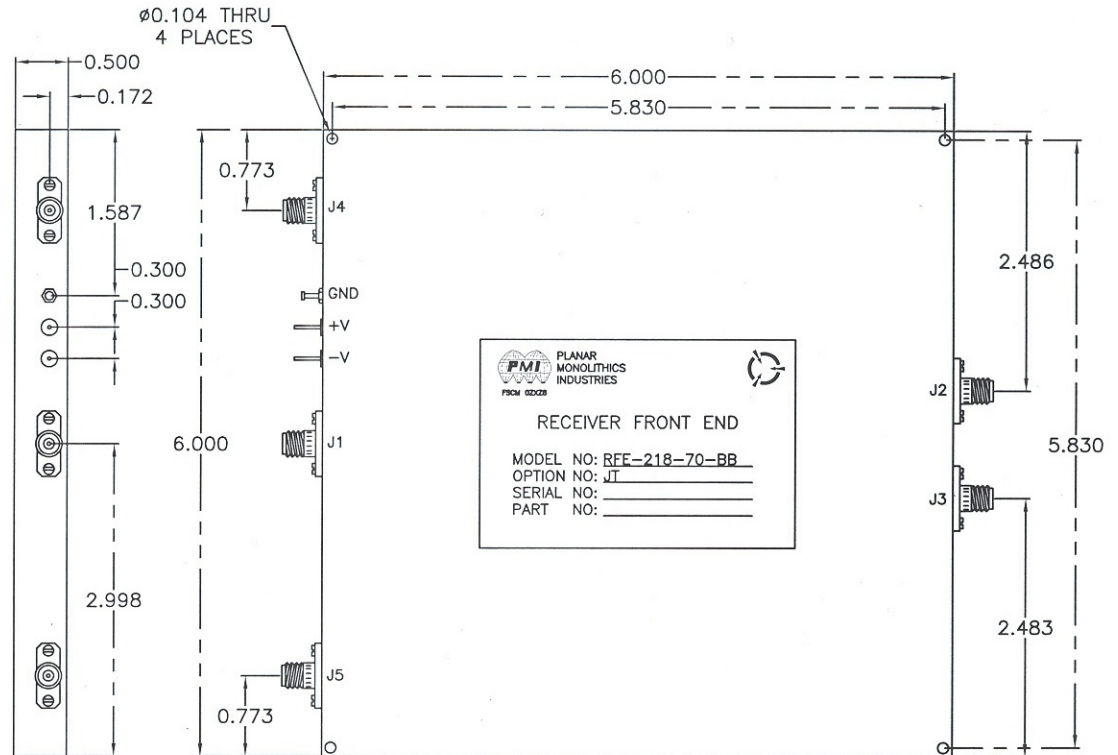
## OPTIONS:

- JT: CUSTOMER SPECIFICATIONS

## ENVIRONMENTAL RATINGS:

- TEMPERATURE: -55°C TO +85°C (OPERATING)  
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

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
	-	ORIGINAL RELEASE JOB# P511046E	9/28/06	

## PLANAR MONOLITHICS INDUSTRIES, INC.

7311-G GROVE ROAD  
FREDERICK, MARYLAND 21704 USA  
TEL: 301-631-1579 FAX: 301-662-2029  
WEBSITE: [www.planarmonolithicsindustries.com](http://www.planarmonolithicsindustries.com)  
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ISO 9001:2000 CERTIFIED



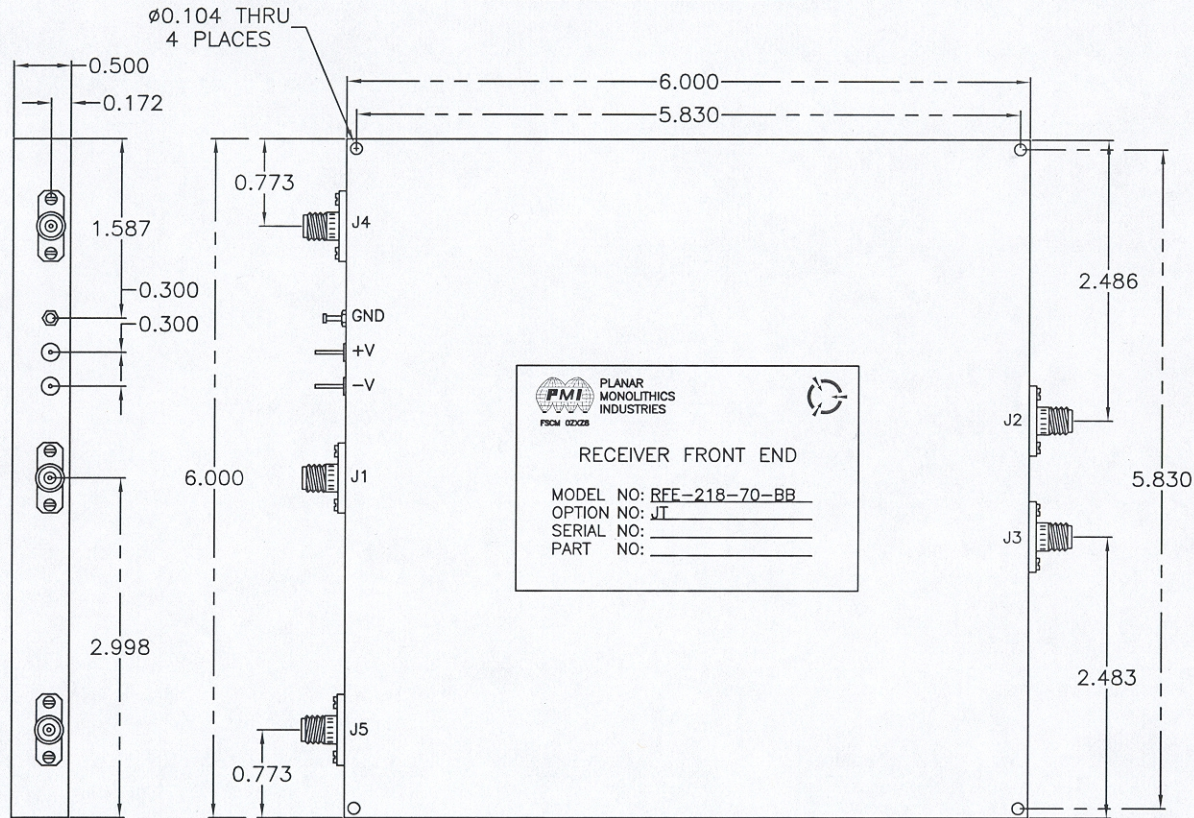
APPROVALS		DATE	TITLE			REV.
DRAWN <i>FDJ</i>		9/28/06	PRODUCT FEATURE RFE-218-70-BB OPTION: JT 2-18 GHz, RECEIVER FRONT END			-
CHECKED <i>DB.J</i>		05/12/06A	SIZE	FSCM NO.	DWG NO.	
ISSUED				0ZXZ8	100-7617	
			SCALE	N:S		SHEET 1 OF 3



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# MECHANICAL OUTLINE



<b>PLANAR MONOLITHICS INDUSTRIES</b> <small>FSCM 6028</small>		
<b>RECEIVER FRONT END</b>		
MODEL NO: <u>RFE-218-70-BB</u> OPTION NO: <u>JT</u> SERIAL NO: _____ PART NO: _____		

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	ORIGINAL RELEASE JOB# P511046E	3/28/06	

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 TOLERANCES:  
 X.XX ±0.020  
 X.XXX ±0.010

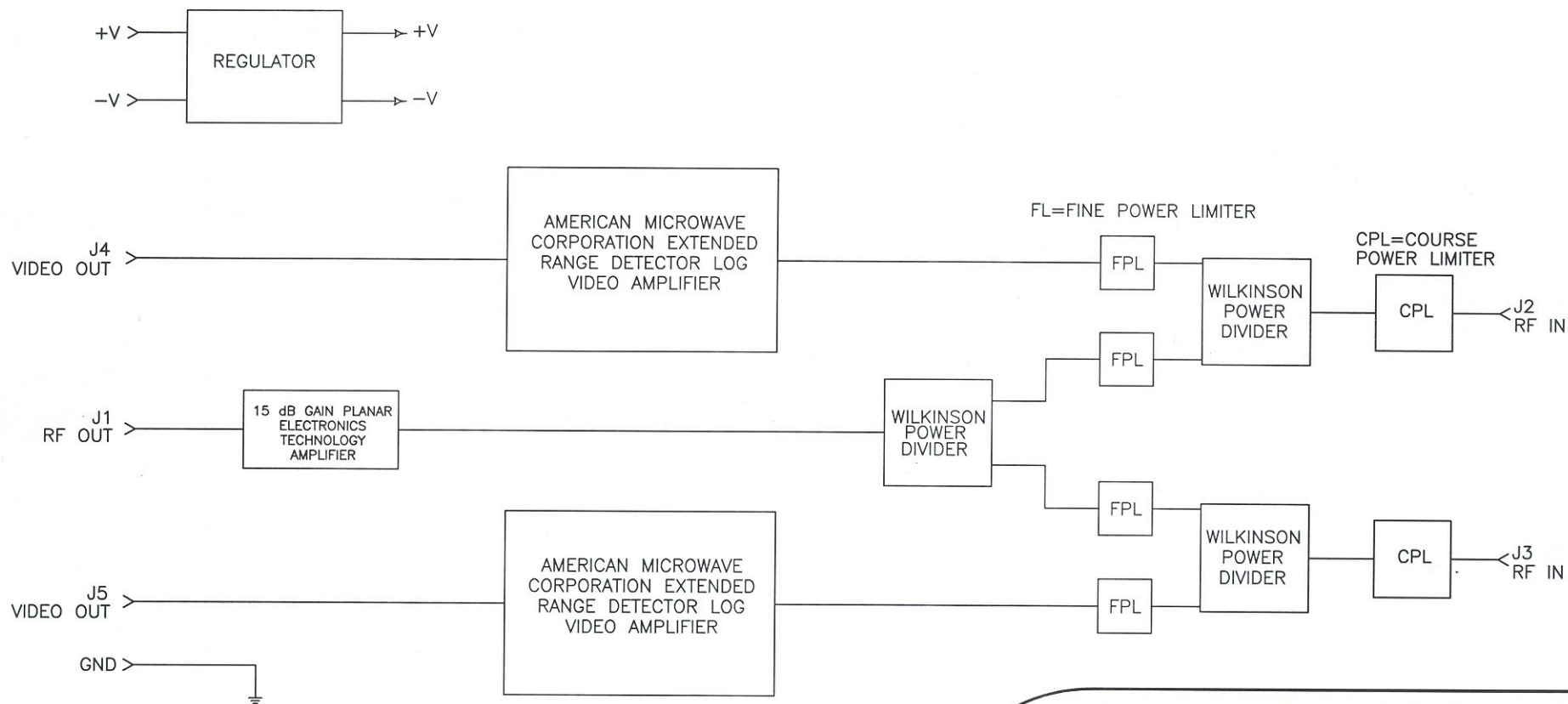
APPROVALS		DATE	TITLE			REV.
DRAWN <i>JDJ</i>		3/28/06	MECHANICAL OUTLINE RFE-218-70-BB OPTION: JT 2-18 GHz, RECEIVER FRONT END			-
CHECKED <i>62.05</i>	ISSUED <i>JY</i>	05/12/06	SIZE A	FSCM NO. OZXZ8	DWG NO. 100-7617	
			SCALE N:S	SHEET 2 OF 3		



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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	ORIGINAL RELEASE JOB# P511046E	9/28/06	



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APPROVALS		DATE	TITLE			
DRAWN <i>JDJ</i>		9/28/06	FUNCTIONAL SCHEMATIC RFE-218-70-BB OPTION: JT 2-18 GHz, RECEIVER FRONT END			
CHECKED <i>[Signature]</i>	ISSUED <i>[Signature]</i>	05/12/00A	SIZE OZXZ8	FSCM NO. 100-7617	DWG NO.	REV. -
SCALE N:S			SHEET 3 OF 3			