

**DESCRIPTION:**

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER: PFS-18G40G IS A FREQUENCY SYNTHESIZER THAT OPERATES OVER THE 18 TO 40 GHz FREQUENCY RANGE. THIS UNIT FEATURES HIGH SPEED, HIGH ACCURACY AND LOW PHASE NOISE.

REVISIONS		DATE	APPROVED
ZONE	REV.	DESCRIPTION	
	-	PRELIMINARY	9/13/2024

**SPECIFICATIONS:**

- FREQUENCY RANGE: .....18 TO 40 GHz
- FREQUENCY STEP SIZE, NOMINAL (LSB): ...0.2 Hz (18 to 30 GHz) 0.4 Hz (30 to 40 GHz)
- FREQUENCY SWITCH TIME: .....200us (SPI MODE) MAX
- OUTPUT POWER: .....10 dBm MIN
- FREQUENCY ACCURACY: .....±2x10<sup>-7</sup> (or same as external ref)
- FREQUENCY STABILITY: .....±2x10<sup>-7</sup> (or same as external ref)
- SPURIOUS: .....-65/-60 (TYP/MAX 18 to 30 GHz)  
.....-60/-55 (TYP/MAX 30 to 40 GHz)
- HARMONICS: .....-15 dBc TYP
- INPUT REF FREQUENCY: .....10/100 MHz (CUSTOMER CHOICE)

• PHASE NOISE:

	20GHz	30GHz	40GHz
dBm/Hz@100Hz	≤-79	≤-75	≤-72
dBm/Hz@1kHz	≤-101	≤-97	≤-94
dBm/Hz@10kHz	≤-110	≤-106	≤-103
dBm/Hz@100kHz	≤-110	≤-106	≤-103
dBm/Hz@1MHz	≤-113	≤-106	≤-105

- REF INPUT POWER .....5±3 dBm
- POWER SUPPLY(V/A): .....+12/1.4 (WARM-UP) +12/1.2 (STABLE)
- SIZE .....4.53" X 3.74" X 0.79"
- CONTROL MODE: .....RS232/SPI
- OPERATE TEMP: .....-40 to +70°C
- STORAGE TEMP: .....-55 to +85°C
- WEIGHT: .....0.95 kg MAX

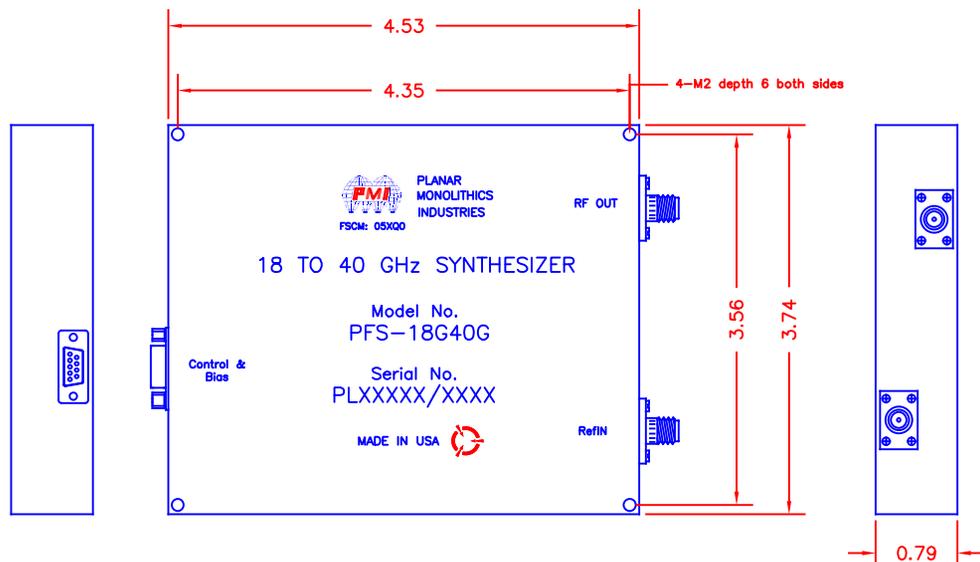
• CTL OPTION SPI MODE CONTROL & BIAS DEFINITION

1	+12V	2	+12V	3	LD
4	NC	5	MOSI	6	MISO
7	SCK	8	LE	9	GND
10	GND				

• CTL OPTION RS232 MODE CONTROL & BIAS DEFINITION

1	+12V	2	+12V	3	LD
4	NC	5	RX	6	TX
7	NC	8	NC	9	GND
10	GND				

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION



ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
X.XX ±0.020  
X.XXX ±0.005

**PMI CONFIDENTIAL AND PROPRIETARY**

**PLANAR MONOLITHICS INDUSTRIES, INC.**

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ISO 9001:2008 CERTIFIED



APPROVALS		DATE	TITLE		REV.
DRAWN	AG	9/13/2024	PRODUCT FEATURE PFS-18G40G 18 TO 40 GHz SYNTHESIZER		-
CHECKED			SIZE A	FSCM NO. 05XQ0	DWG NO. PRELIMINARY
ISSUED			SCALE N:S	SHEET 1 OF 1	