

DESCRIPTION:

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER: PFS-20G40G IS A FREQUENCY SYNTHESIZER THAT OPERATES OVER THE 20.0 TO 40.0 GHz FREQUENCY RANGE. THIS UNIT FEATURES HIGH SPEED, HIGH ACCURACY AND LOW PHASE NOISE.

REVISIONS		DATE	APPROVED
ZONE	REV.	DESCRIPTION	
	-	PRELIMINARY	5/31/22
	1	PRELIMINARY	9/13/24

SPECIFICATIONS:

- FREQUENCY RANGE: 20.0 TO 40.0 GHz
- FREQUENCY STEP SIZE, NOMINAL (LSB): ... 0.2 Hz (20 to 30 GHz) 0.4 Hz (30 to 40 GHz)
- FREQUENCY SWITCH TIME: 200us (SPI MODE) MAX
- OUTPUT POWER: 10 dBm MIN
- FREQUENCY ACCURACY: $\pm 2 \times 10^{-7}$ (or same as external ref)
- FREQUENCY STABILITY: $\pm 2 \times 10^{-7}$ (or same as external ref)
- SPURIOUS: -65/-60 (TYP/MAX 20 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

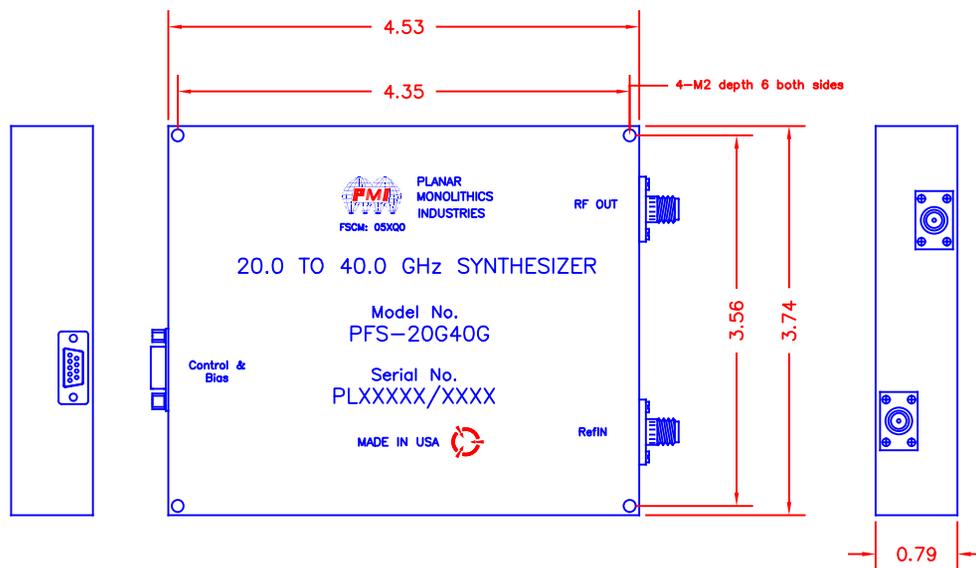
- REF INPUT POWER 5 ± 3 dBm
- POWER SUPPLY(V/A): +12/1.4 (WARM-UP) +12/1.2 (STABLE)
- SIZE 4.53" X 3.74" X 0.79"
- CONTROL MODE: RS232/SPI
- OPERATE TEMP: -40 to +70°C
- STORAGE TEMP: -55 to +85°C
- WEIGHT: 0.95 kg MAX

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				



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

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-662-5019 FAX: 301-662-1731
WEBSITE: www.pmi-rf.com
E-MAIL: sales@pmi-rf.com
ISO 9001:2008 CERTIFIED



APPROVALS		DATE	TITLE		
DRAWN AF		5/31/22	PRODUCT FEATURE PFS-20G40G 20.0 TO 40.0 GHz SYNTHESIZER		
CHECKED			SIZE A	FSCM NO. 05XQ0	DWG NO. PRELIMINARY
ISSUED			SCALE N:S		SHEET 1 OF 1

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION