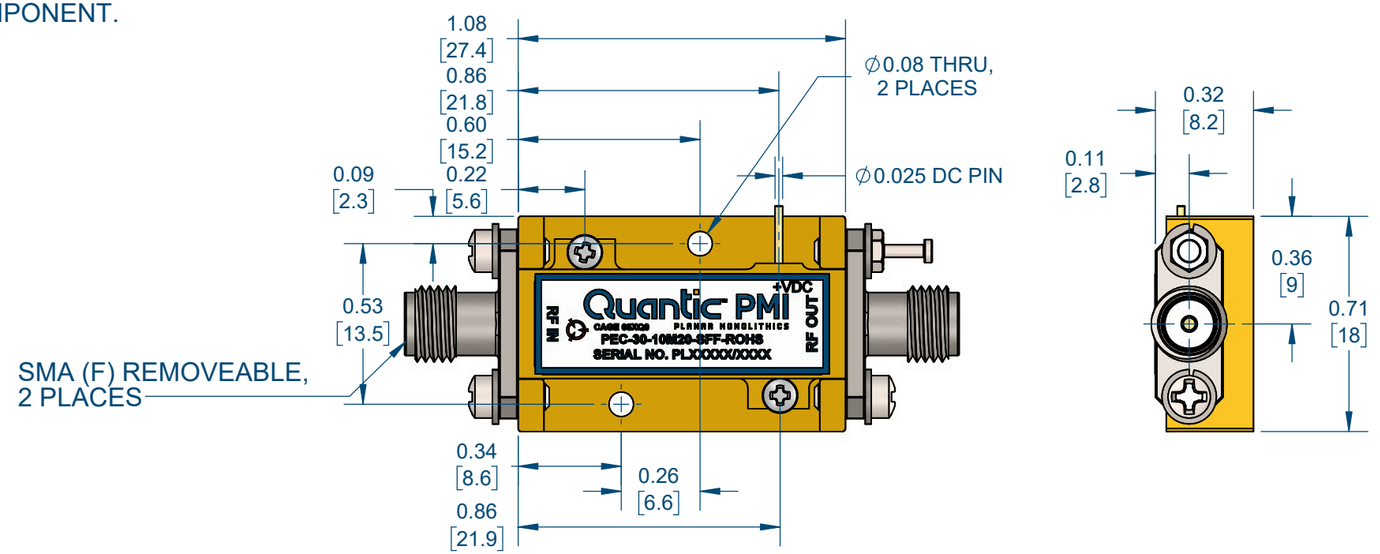
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	3/26/2024	
	B1	ECN # 25-0141	5/9/2025	

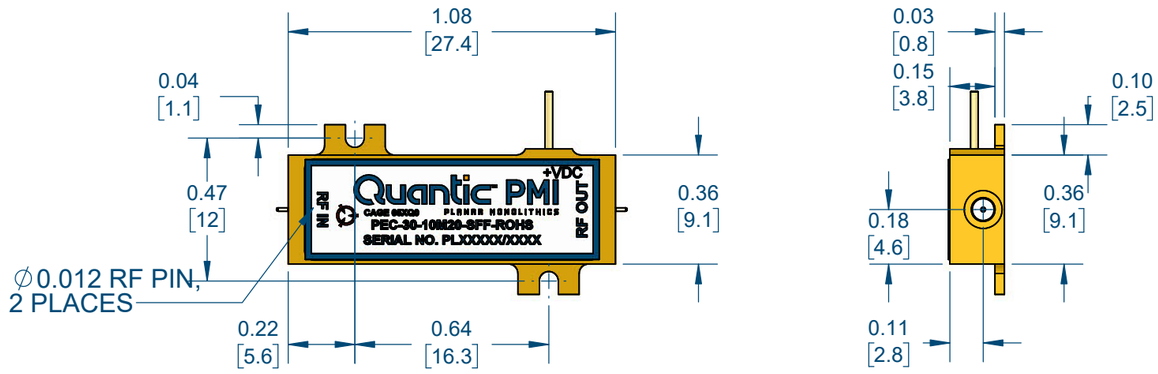
DESCRIPTION:

PMI MODEL NUMBER: PEC-30-10M20-SFF-ROHS IS A VERY LOW NOISE AMPLIFIER WITH WORKING FREQUENCY RANGE OF 10MHz TO 20GHz. THIS AMPLIFIER IS SUPPLIED IN A HOUSING THAT CAN BE USED AS A SURFACE MOUNT OR CONNECTORIZED COMPONENT.

SPECIFICATIONS:

FREQUENCY RANGE:	10 MHz TO 20 GHz
GAIN:	+26 dB MIN. (10 MHz TO 18 GHz) +28 dB MIN. (18 GHz TO 20 GHz)
GAIN FLATNESS:	±2.0 dB MAX. (10 MHz TO 18 GHz) ±2.5 dB TYP. , ±2.75 MAX. (18 GHz TO 20 GHz)
NOISE FIGURE:	13 dB MAX. (10 MHz TO 20 MHz) 7 dB MAX. (20 MHz TO 50 MHz) 4.5 dB MAX. (50 MHz TO 0.5 GHz) 3.5 dB MAX. (0.5 GHz TO 18 GHz) 4.0 dB MAX. (18 GHz TO 20 GHz)
OP1dB:	+13.5 dBm MIN. (10 MHz TO 18 GHz) +12 dBm MIN. (18 GHz TO 20 GHz)
PSat:	+15 dBm MIN. (10 MHz TO 18 GHz) +13 dBm MIN. (18 GHz TO 20 GHz)
OIP3:	+20 dBm MIN. (10 MHz TO 20 GHz) @ 25°C +14 dBm MIN. @ TEMP EXTREMES
VSWR INPUT:	2.0:1 MAX (10 MHz TO 18 GHz) 2.2:1 MAX. (18 GHz TO 20 GHz)
VSWR OUTPUT:	2.1:1 MAX (10 MHz TO 18 GHz) 2.4:1 MAX. (18 GHz TO 20 GHz)
SECOND HARMONIC	
(-30dBm INPUT POWER)	40 dBc TYP. , 30 dBc MIN.
(AT P1dB)	12 dBc TYP. , 10 dBc MIN.
(+5 dBm OVER P1dB)	12 dBc TYP. , 9 dBc MIN.
(+10 dBm OVER P1dB)	12 dBc TYP. , 9 dBc MIN.
(+15 dBm OVER P1dB)	12 dBc TYP. , 9 dBc MIN.
REVERSE ISOLATION:	36 dB MIN. (10 MHz TO 18 GHz) 35 dB MIN. (18 GHz TO 20 GHz)
DC SUPPLY:	+12 TO +15 VDC @ 170 mA MAX
CONNECTORS IN/OUT:	SMA FEMALE
FINISH:	GOLD PLATED





ENVIRONMENTAL RATINGS:

TEMPERATURE:	-40°C TO +85°C (OPERATING) -57°C TO +100°C (STORAGE)
HUMIDITY:	MIL-STD-202F, METHOD 103B COND. B
SHOCK:	MIL-STD-202F, METHOD 213B COND. B
ALTITUDE:	MIL-STD-202F, METHOD 105C COND. B
TEMPERATURE CYCLE:	MIL-STD-202F, METHOD 107D COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION
SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

FEATURES:

INTERNAL VOLTAGE REGULATION
UNCONDITIONAL STABILITY

AVAILABLE OPTIONS:

VARIOUS PACKAGE TYPES
VARIOUS CONNECTOR TYPES
TEMPERATURE COMPENSATION
GAIN AND PHASE MATCHING
MIL-STD-883 SCREENING AVAILABLE

PMI CONFIDENTIAL AND PROPRIETARY

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ± 0.010 .XXX ± 0.005 ANGLES ±

MATERIAL:

FINISH:

NEXT ASSY | USED ON

APPLICATION

PART NO.

APPROVALS	DATE
DRAWN D. HOSCHAR	3/26/2024
REDRAWN	
ISSUED	

Quantic PMI
PLANAR MONOLITHICS
7309-A GROVE ROAD FREDERICK MARYLAND 21704 USA
TEL: (301) 662-5019. FAX: (301) 662-1731
WEB: WWW.QUANTICPMI.COM; EMAIL: SALES@QUANTICPMI.COM
ISO 9001 CERTIFIED

TITLE: OUTLINE
PEC-30-10M20-SFF-ROHS

SIZE	FSCM NO.	DWG NO.	REV.
B	05XQ0	27048520	B1

SCALE 2:1 SHEET 1 OF 1