DESCRIPTION

LOW NOISE AMPLIFIER DESIGNED FOR MILITARY AND INDUSTRIAL APPLICATIONS. THIS AMPLIFIER IS SUPPLIED IN OUR STANDARD HERMETICALLY SEALED PE2 HOUSING THAT CAN BE USED AS AN SMA CONNECTORIZED / SURFACE MOUNT COMPONENT. THIS MODEL PROVIDES THE FOLLOWING PERFORMANCE.

SPECIFICATIONS & TEST PROTOCOL

Valid over entire operating range of −55°C to +85°C and over entire frequency range (IAW * & **)

- FREQUENCY RANGE: — 2.0 to 18.0 GHz **
- NOMINAL GAIN: — 26 dB **
- GAIN WINDOW: — ±4.0 dB, RELATIVE TO NOMINAL GAIN (22 dB MIN to 30dB MAX) **
- GAIN FLATNESS: — ±1.5 dB MAXIMUM, RELATIVE TO NOMINAL GAIN **
- NOISE FIGURE: — 5.0 dB MAXIMUM **
- OP1dB: — +21 dBm MINIMUM, 25 dBm GOAL **
- OUTPUT 2ND ORDER INTERCEPT (OIP2): — +37 dBm MINIMUM *
- OUTPUT 3RD ORDER INTERCEPT (OIP3): — +30 dBm MINIMUM *
- INPUT VSWR: — 2.0:1 MAXIMUM *
- OUTPUT VSWR: — 2.0:1 MAXIMUM * (2.0 TO 15.0 GHz)
  2.8:1 MAXIMUM * (15.0 TO 18.0 GHz)
- CONNECTORS: — SMA (F) REMOVABLE
- DC SUPPLY: — +11 TO +12.5 VDC @ 400 mA GOAL, 450 mA MAXIMUM **
- SIZE — (L) 1.08" X (W) 0.71" X (H) 0.29"
  (EXCLUDING CONNECTORS)
- FINISH — GOLD PLATED

* DATA PROVIDED MEETING SPECIFICATIONS AT +25°C
** DATA PROVIDED MEETING SPECIFICATIONS AT −55°C, +25°C and +85°C
Gain and gain flatness shall be measured with 100 MHz steps
NF and OP1dB shall be measured with 1 GHz steps
OIP2 and OIP3 shall be measured with 2 GHz steps

ENVIRONMENTAL STRESS SCREENING (ESS) IAW MIL-PRF-38534, Class H

- 100% Non−Destruct Wire Bond Pull test according to MIL−STD−883 Method 2023
- Internal Visual Inspection MIL−STD−883 Method 2017
- Stabilization Bake , MIL−STD−883C, Method 1008, Condition C (Before Temperature cycle)
- Temperature cycle MIL−STD−883 Method 1010, C 10 cycles (−55°C to +95°C)
- Burn in according to MIL−STD−883 Method 1015 for class H devices
- Final Leak Test, MIL−STD−883C, Method 1014, Condition A, or equivalent
- Vibration in direction Z shall be part of the Environmental Stress Screening (ESS). If possible DC power power shall be applied to the unit during vibration. The vibration spectra shall be:
  - Amplitude: The unit shall be subjected to a simple harmonic motion having an amplitude of either 0.06−inch double amplitude (maximum total excursion) or 10G (peak), whichever is less. The tolerance on vibration amplitude shall be ±10 percent.
  - Frequency range: The vibration frequency shall be varied logarithmically between the approximate limits of 10 to 2,000 Hz (Alternate procedure for use of linear in place of logarithmic change of frequency), except that the procedure of method 201 of MIL−STD−202F may be applied during the 10 to 55 Hz band of the vibration frequency range.
  - Alternate procedure for use of linear in place of logarithmic change of frequency. Linear rate of change of frequency is permissible under the following conditions:
    - The frequency range above 55 Hz shall be subdivided into not less than three bands. The ratio of the maximum frequency to the minimum minimum frequency in each band shall be not less than two.
    - The rate of change of frequency in hertz per minute (Hz/min) shall be constant for any one band.
    - The ratios of the rate of change of frequency of each band to the maximum frequency of that band shall be approximately equal.
  - Sweep time and duration: The entire frequency range of 10 to 2,000 Hz and return to 10 Hz shall be traversed in 20 minutes.

Note: ESS procedure may be exchanged to the vendor's standard procedure, after agreement with

ENVIRONMENTAL REQUIREMENTS

- **HERMETIC MODULE**
- **TEMPERATURE:** — −55°C TO + 85°C (OPERATING)
  −55°C TO +125°C (STORAGE)
- **HUMIDITY:** — MIL−STD−202F, METHOD 103B COND. B (96H AT 95% R.H.)
- **SHOCK:** — MIL−STD−202F, METHOD 213B COND. J (30G, 11ms)
- **VIBRATION:** — MIL−STD−202F, METHOD 204D COND. B
  (0.06" Double Amplitude or 15G, which ever is less)
- **ALTITUDE:** — MIL−STD−202F, METHOD 105G COND. B (50,000 FEET)
- **TEMPERATURE SHOCK:** — MIL−STD−202F, METHOD 107D COND. A (5 CYCLES)

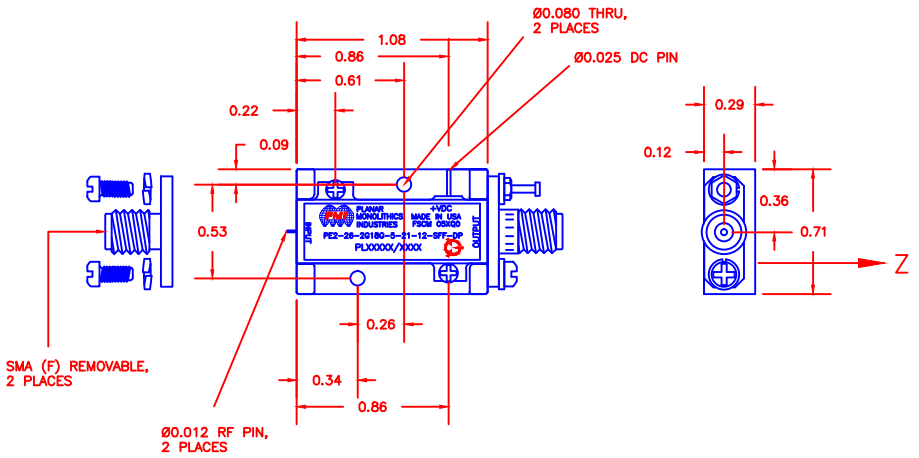
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION WITH CUSTOMER'S APPROVAL

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX ±0.020
X.XXX ±0.010

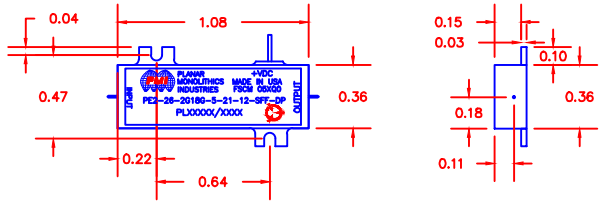
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	08/30/17	SPH
	B1	ECN # 18−0016	01/26/18	

MECHANICAL OUTLINE

PE2 HOUSING WITH CARRIER



PE2 HOUSING WITHOUT CARRIER (SURFACE MOUNT)



PMI CONFIDENTIAL AND PROPRIETARY

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APPROVALS	DATE
DRAWN SPH	01/26/18
CHECKED	
ISSUED	

TITLE: PRODUCT FEATURE
PE2−26−2G18G−5−21−12−SFF−DP

SIZE	FSCM NO.	DWG NO.	REV.
A	05XQ0	27033151	B1

SCALE N:S SHEET 1 OF 1