

**Typical Characteristics  
ON  
PEC-14-2G18G-4-27-15-SFF**

**PMI MODEL NUMBER: PEC-14-2G18G-4-27-15-SFF IS A 2.0 TO 8.0 GHz MEDIUM POWER, LOW NOISE AMPLIFIER OFFERING 13 dB GAIN AND A OP1dB OF +27dBm WITH A LOW NOISE FIGURE OF 4 dB. THIS AMPLIFIER IS SUPPLIED IN A HOUSING MEASURING 1.0" X 0.63" X 0.25" WITH SMA MALE/FEMALE CONNECTORS.**



**July 26, 2023**

**Designed By:**

**Engineering PMI**

**Drawings By:**

**Janice Escano**

**Tested and Reported By:**

**Alfredo Lopez**

# Typical Characteristics ON PEC-14-2G18G-4-27-15-SFF

## Product Feature

**DESCRIPTION:**

PMI MODEL NUMBER: PEC-14-2G18G-4-27-15-SFF IS A 2.0 TO 8.0 GHz MEDIUM POWER, LOW NOISE AMPLIFIER OFFERING 13 dB GAIN AND A OP1dB OF +27dBm WITH A LOW NOISE FIGURE OF 4. dB. THIS AMPLIFIER IS SUPPLIED IN A HOUSING MEASURING 1.0" X 0.63" X 0.25" WITH SMA MALE/FEMALE CONNECTORS.

**SPECIFICATIONS:**

- FREQUENCY: 2.0 TO 8.0 GHz
- GAIN: 13 dB ±1.5 dB MAX
- GAIN FLATNESS: ±0.75 dB MAX
- NOISE FIGURE: 5.0 dB TYPICAL, 6.0 dB MAX. (2 TO 3 GHz)  
4.5 dB TYPICAL, 5.0 dB MAX. (3 TO 5 GHz)  
3.5 dB TYPICAL, 4.5 dB MAX. (5 TO 8 GHz)
- OP1dB: +26dBm MIN., +27.5dBm TYPICAL
- VSWR INPUT/OUTPUT: 2.0:1 MAX.
- IMPEDANCE: 50 OHMS
- INPUT POWER: +27dBm CW MAX.
- DC VOLTAGE SUPPLY: +11.3V FIXED\*
- DC CURRENT DRAW: Iq = 360 mA TYP
- CONNECTORS IN/OUT: SMA MALE (IN) FEMALE (OUT) CONNECTORS
- FINISH: GOLD PLATED
- \*NO INTERNAL VOLTAGE REGULATION OR REVERSE PROTECTION

**FEATURES:**

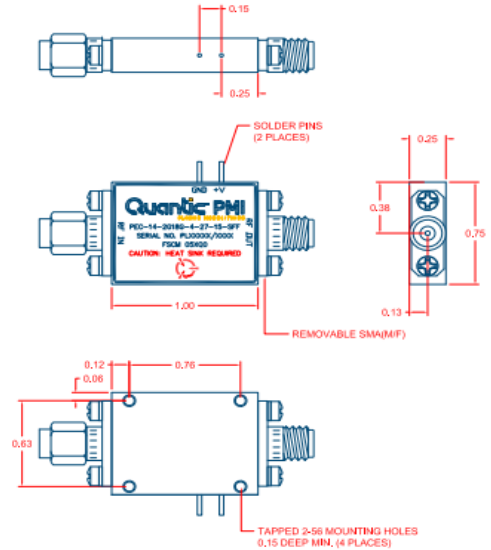
UNCONDITIONAL STABILITY

**ENVIRONMENTAL RATINGS:**

- TEMPERATURE: -55 TO +85 DEG. C (OPERATING)  
-65 TO +125 DEG. C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. C
- 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: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION  
NOTE: SPECIFICATIONS ARE VALID AT +25C.

| REVISIONS |      |                  |         |
|-----------|------|------------------|---------|
| ZONE      | REV. | DESCRIPTION      | DATE    |
|           | A1   | ORIGINAL RELEASE | 3/28/23 |
|           |      |                  |         |
|           |      |                  |         |
|           |      |                  |         |



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

PMI CONFIDENTIAL AND PROPRIETARY

7309-A GROVE ROAD  
FREDERICK, MARYLAND 21704 USA  
TEL: (301)-662-5019, FAX: (301)-662-1731  
WEB: www.quantipmi.com  
EMAIL: sales@quantipmi.com  
ISO 9001 CERTIFIED

**Quantic PMI**  
PLANAR MONOLITHICS

|                   |  |             |  |                          |  |
|-------------------|--|-------------|--|--------------------------|--|
| APPROVALS         |  | DATE        |  | TITLE                    |  |
| DRAWN: J. SPALANO |  | 3/28/23     |  | OUTLINE                  |  |
| CHECKED:          |  | SIZE: A     |  | PEC-14-2G18G-4-27-15-SFF |  |
| ISSUED:           |  | SIZE: 05XQ0 |  | DWG NO. 27046180         |  |
|                   |  | SCALE: N: S |  | REV. A1                  |  |
|                   |  |             |  | SHEET 1 OF 1             |  |

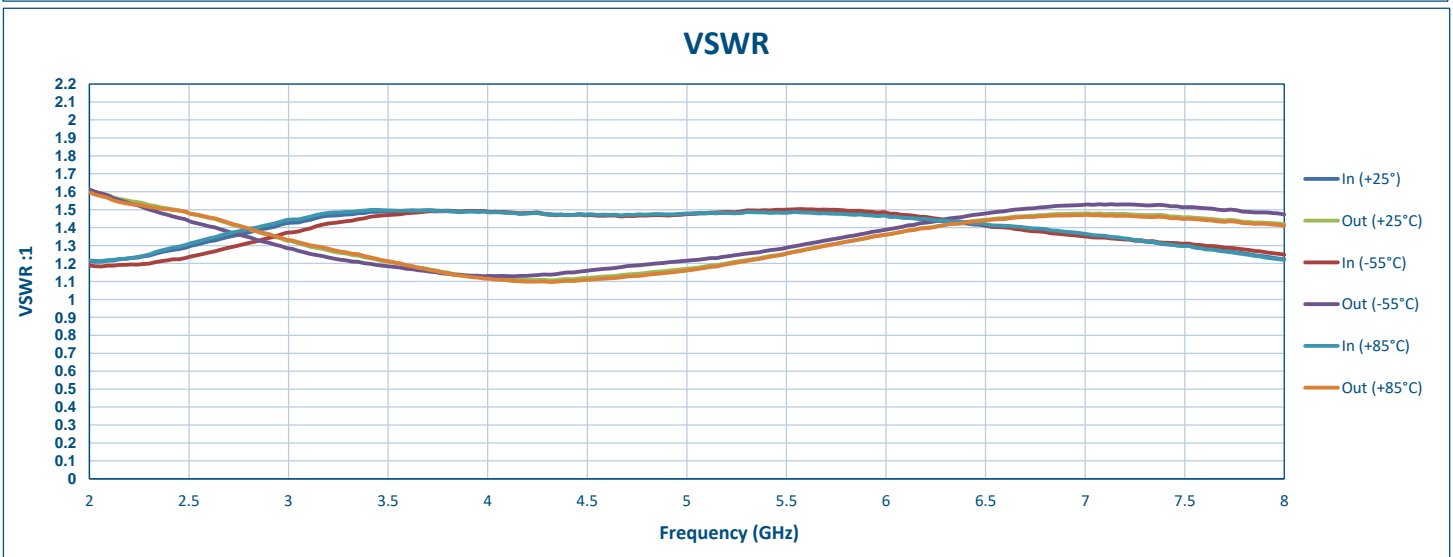
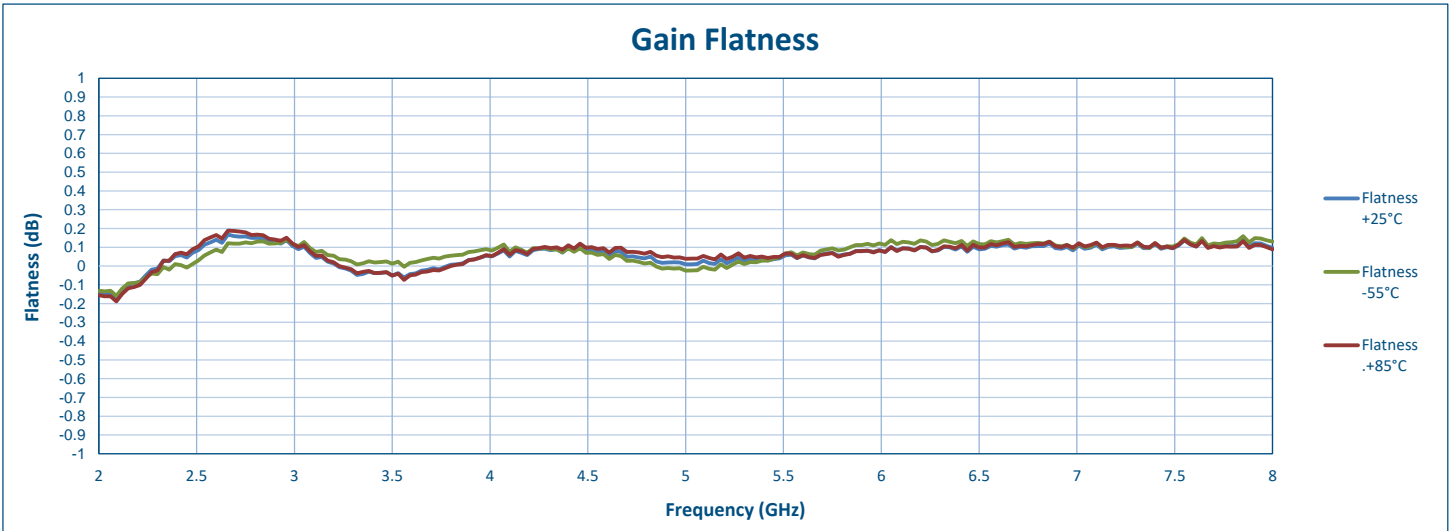
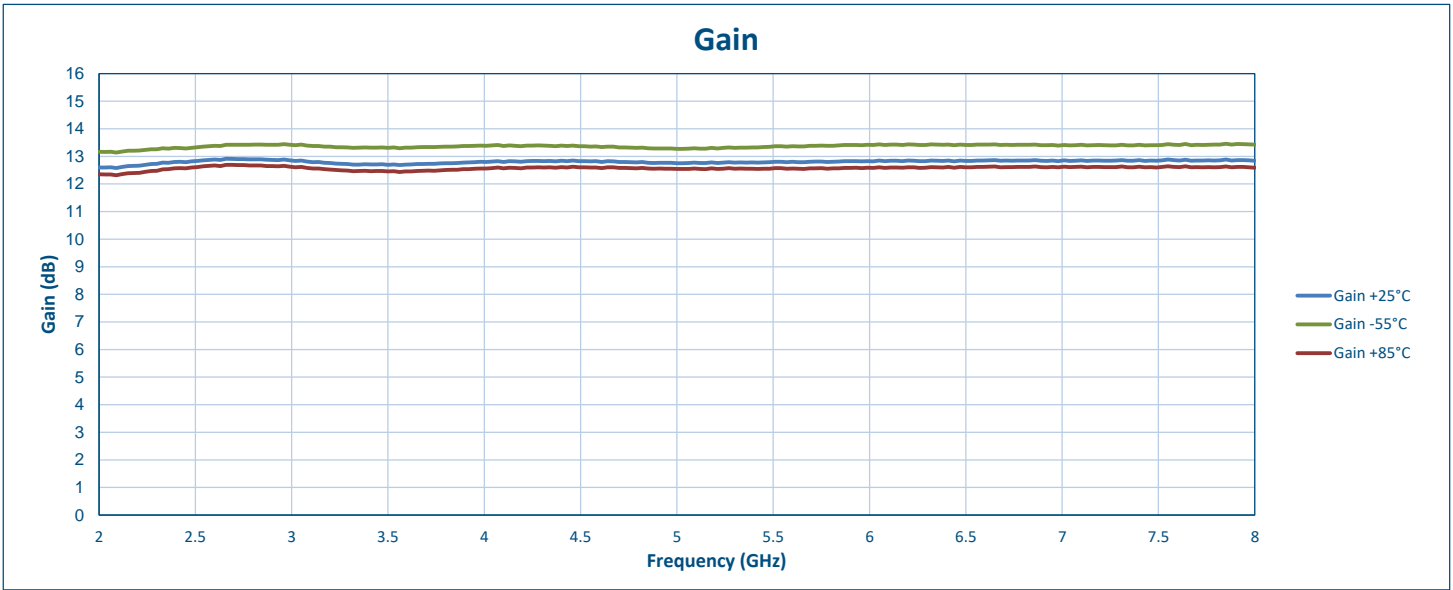
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**Technical Specifications**

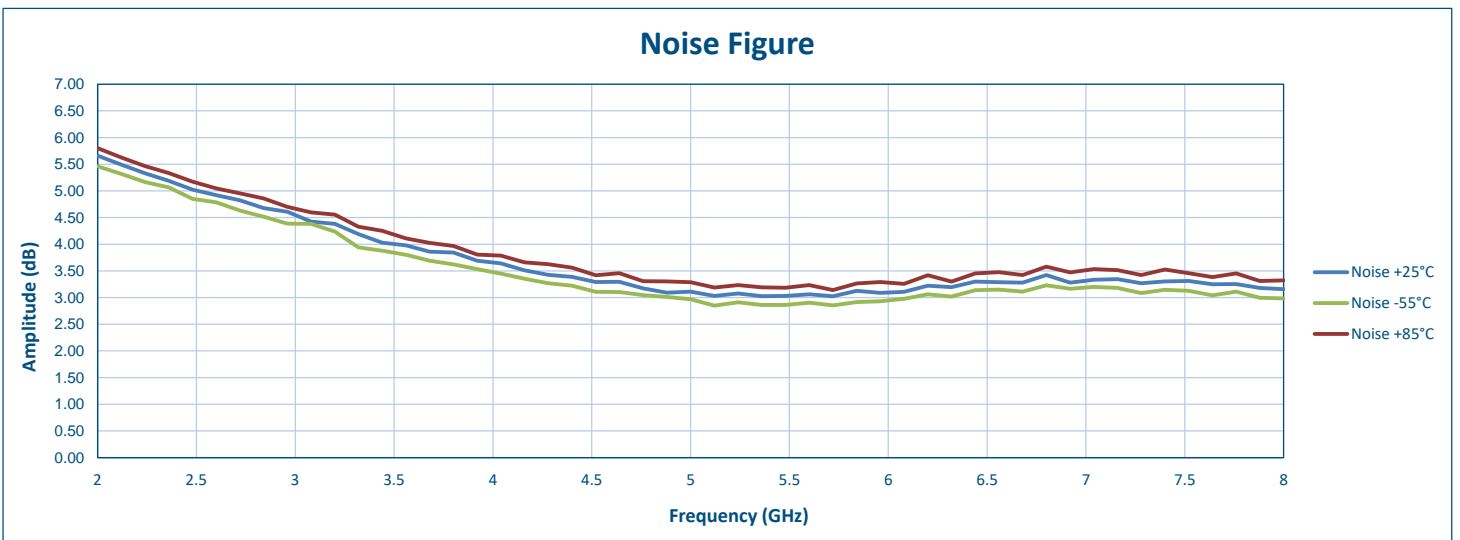
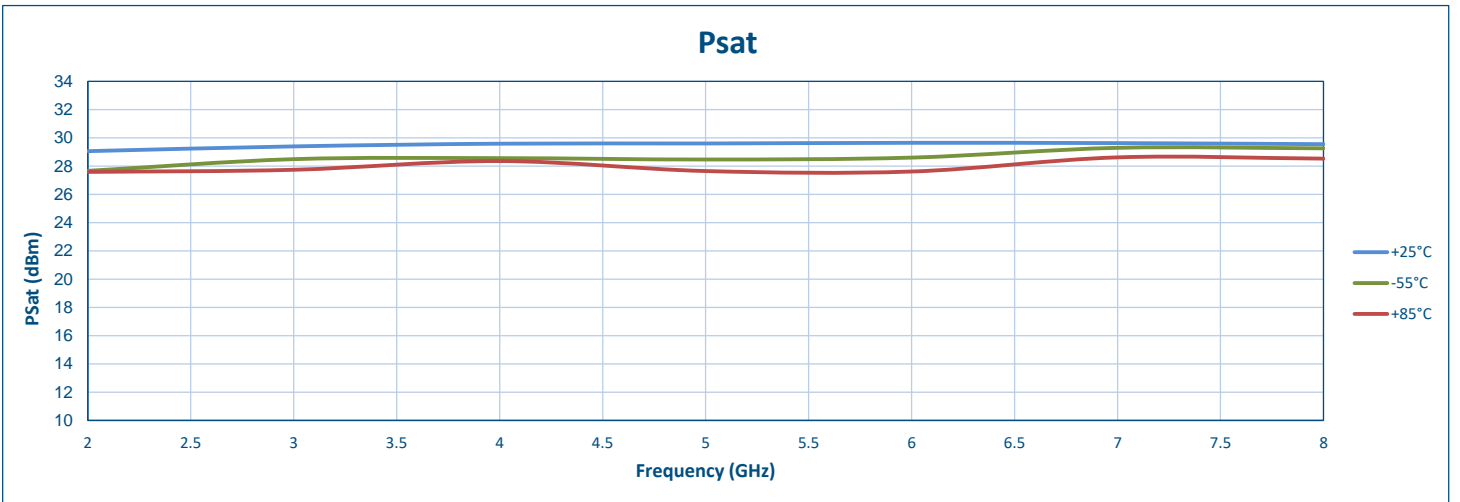
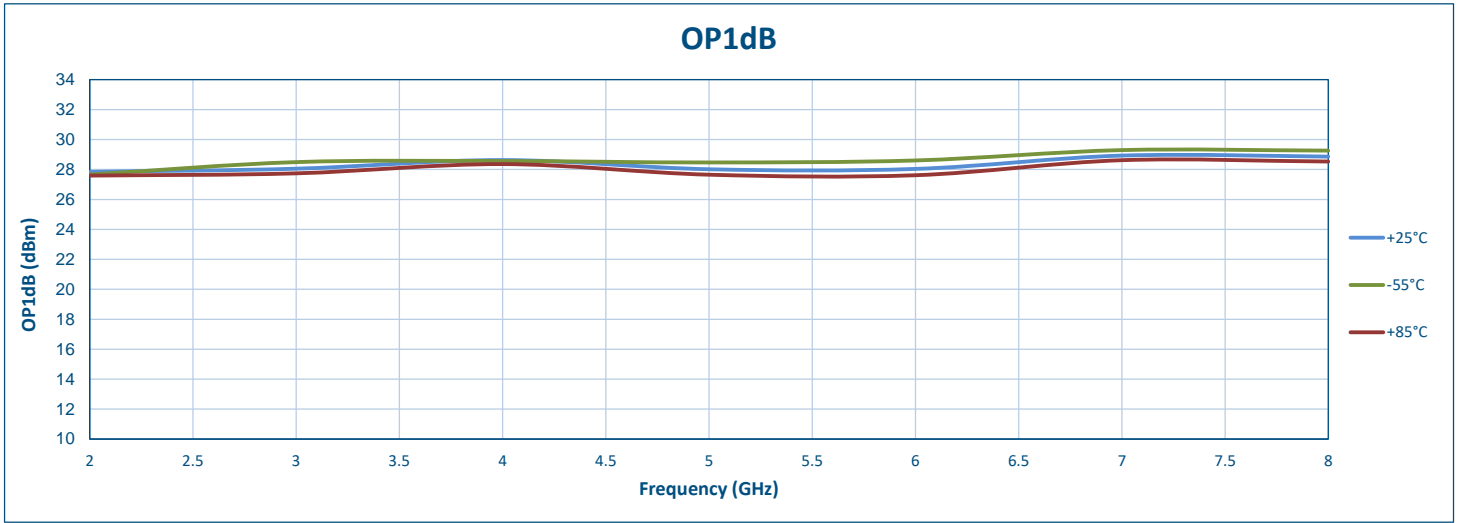
| TEST ITEM NO. | PARAMETERS                             | SPECIFIED VALUE  | Test Results          |                       |                       | QA QC |
|---------------|--|--|-----------------------|-----------------------|-----------------------|-------|
|               |  |  | +25°C                 | -55°C                 | +85°C                 |       |
| 1             | Frequency Range:                       | 2.0 GHz to 8.0 GHz   | 2.0 to 8.0 GHz        | 2.0 to 8.0 GHz        | 2.0 to 8.0 GHz        |       |
| 2             | Gain:                                  | 13 dB ±1.5 dB Max  | 12.91 dB Max.         | 13.46 dB Max.         | 12.69 dB Max.         |       |
|               |  |  | 12.58 dB Min.         | 12.58 dB Min.         | 12.32 dB Min.         |       |
|               |  |  | See Graph             | See Graph             | See Graph             |       |
| 3             | Gain Flatness:                         | ± 0.75 dB Max  | ±0.17 dB<br>See Graph | ±0.16 dB<br>See Graph | ±0.19 dB<br>See Graph |       |
| 4             | Noise Figure:                          | 5.0 dB Typ, 6.0 dB Max (2-3 GHz)<br>4.5 dB Typ, 5.0 dB Max (3-5 GHz)<br>3.5 dB Typ, 4.5 dB Max (5-8 GHz) | 5.66 dB               | 5.46 dB               | 5.8 dB                |       |
|               |  |  | 4.61 dB               | 4.39 dB               | 4.7 dB                |       |
|               |  |  | 3.42 dB               | 3.23 dB               | 3.58 dB               |       |
|               |  |  | See Graph             | See Graph             | See Graph             |       |
| 5             | OP1dB:                                 | +26 dBm Min.<br>+27.5 dBm Typical  | 28.93 dBm Max.        | 29.3 dBm Max.         | 28.62 dBm Max.        |       |
|               |  |  | 27.84 dBm Min.        | 27.67 dBm Min.        | 27.59 dBm Min.        |       |
|               |  |  | See Graph             | See Graph             | See Graph             |       |
| 6             | VSWR:<br>(Input/Output)                | 2.0:1 Max.   | 1.5 :1 (In)           | 1.5 :1 (In)           | 1.5 :1 (In)           |       |
|               |  |  | 1.61 :1 (Out)         | 1.61 :1 (Out)         | 1.6 :1 (Out)          |       |
|               |  |  | See Graph             | See Graph             | See Graph             |       |
| 7             | Input Power:                           | +27 dBm CW Max.  | Pass<br>+27 dBm CW    | Pass<br>+27 dBm CW    | Pass<br>+27 dBm CW    |       |
| 8             | DC Voltage Supply:<br>DC Current Draw: | +11.3V @ Iq = 360 mA Typ*  | +11.3 VDC<br>@ 303 mA | +11.3 VDC<br>@ 302 mA | +11.3 VDC<br>@ 305 mA |       |

\*No Internal Voltage Regulation or Reverse Protection

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