

DESCRIPTION:

PMI MODEL NUMBER PEC-42-1G40G-20-12-292FF-BT IS A 1 GHz TO 40 GHz LOW NOISE AMPLIFIER THAT HAS A TYPICAL GAIN OF 40 dB WHILE MAINTAINING A ±2.5 dB FLATNESS. BIAS CAN BE APPLIED VIA THE OUTPUT RF CONNECTOR OR DC PIN AND COMES IN A SMALL 1.37"X1.00"X0.60" PACKAGE OUTFITTED WITH 2.92 mm FEMALE CONNECTORS.

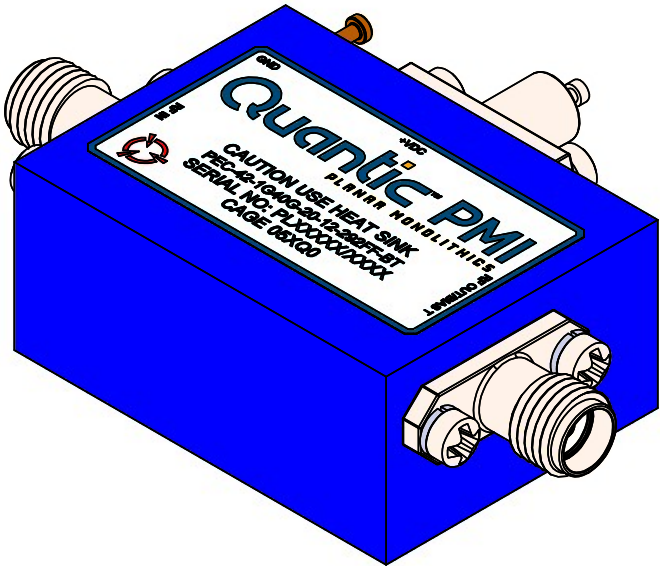
SPECIFICATIONS:

- FREQUENCY RANGE:..... 1 GHz TO 40 GHz
- GAIN:..... 40 dB TYP / 34 dB MIN
- GAIN FLATNESS:..... ±2.5 dB TYP
- NOISE FIGURE:..... 5.5 dB TYP (UP TO 26.5 GHz)
- OP1dB:..... +19 dBm TYP (1 GHz TO 18 GHz)  
+17 dBm TYP (18 GHz TO 40 GHz)
- PSAT:..... +23 dBm TYP (1 GHz TO 18 GHz)  
+20 dBm TYP (18 GHz TO 40 GHz)
- INPUT POWER HANDLING:..... +17 dBm CW MAX
- VSWR (INPUT/OUTPUT):..... 2.0:1 MAX (INPUT)  
2.5:1 MAX (OUTPUT)
- DC VOLTAGE SUPPLY:..... +12 TO +15 VDC
- DC CURRENT DRAW:..... 550 mA NOMINAL
- CONNECTORS (INPUT/OUTPUT):..... 2.92mm (F)
- FINISH:..... PAINTED BLUE, MOUNTING SURFACE FREE OF PAINT (GOLD FINISH) FOR PROPER HEAT DISSIPATION
- SEALING:..... HARD CONDUCTIVE EPOXY SEAL COMES STANDARD AND HERMETIC SEAL UPON REQUEST

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -55°C TO +85°C (OPERATING)  
-65°C TO +117°C (STORAGE)
- HUMIDITY:..... MIL-STD-202, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202, METHOD 213B COND. B
- VIBRATION:..... MIL-STD-202, METHOD 204D COND. B
- ALTITUDE:..... MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202, METHOD 107D COND. A

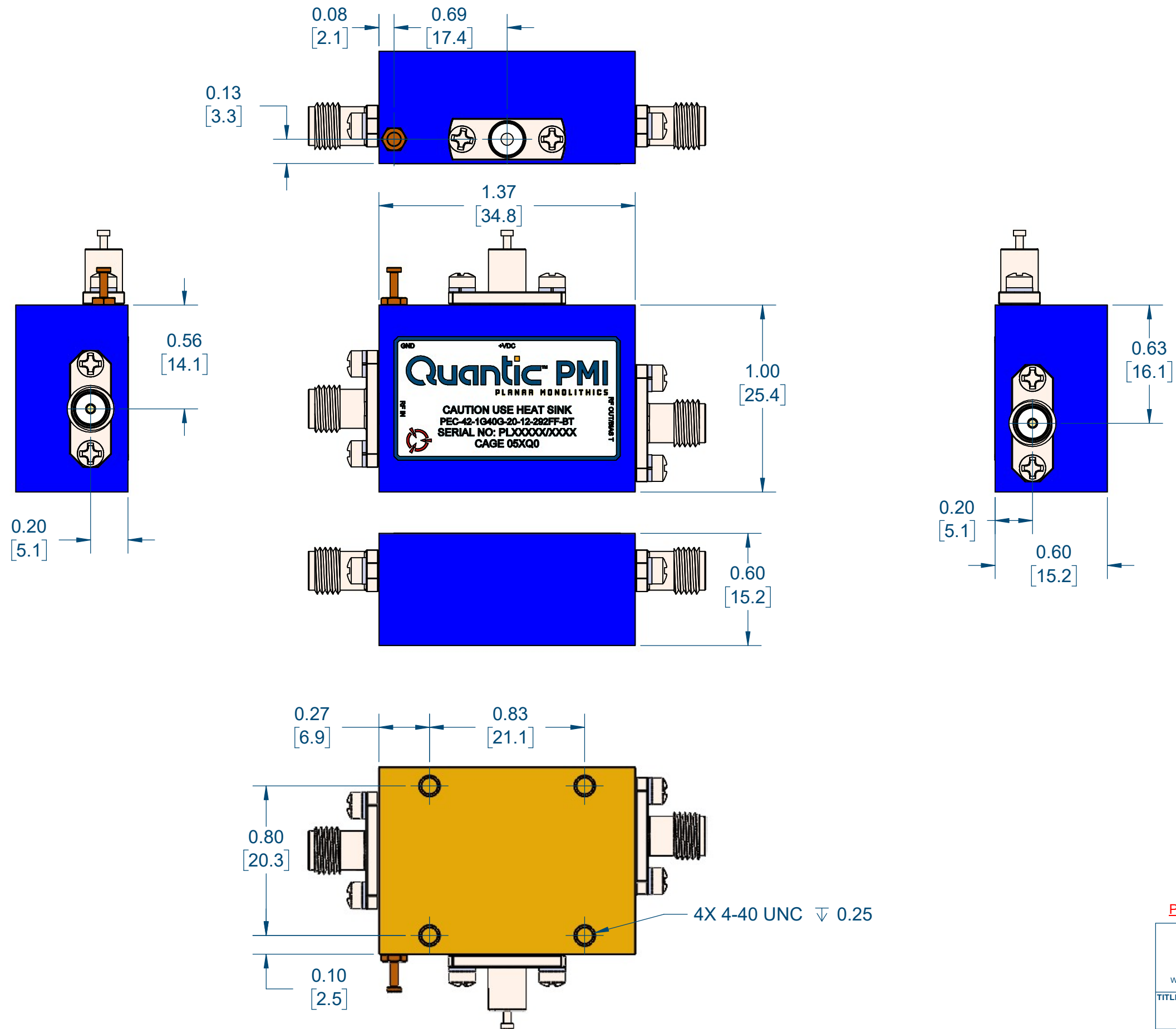
| ZONE | REV. | DESCRIPTION      | DATE      | APPROVED |
|------|------|------------------|-----------|----------|
|      | A1   | ORIGINAL RELEASE | 10/2/2020 |          |
|      | A2   | ECN # 24-0348    | 3/21/2025 |          |
|      |      |                  |           |          |



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

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|                                                                                                                                                        |  |           |  |           |  |                                                                                                                                                                                                                                                                  |          |          |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------|--|-----------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|--------------|
| <div>UNLESS OTHERWISE SPECIFIED<br/>DIMENSIONS ARE IN INCHES<br/>TOLERANCES ARE:<br/>FRACTIONS DECIMALS ANGLES<br/>± .XX ± 0.02 ±<br/>XXX ± 0.01</div> |  | APPROVALS |  | DATE      |  | <div>Quantic PMI</div> <div>PLANAR MONOLITHICS</div> <div>7309-A GROVE ROAD FREDERICK MARYLAND 21704 USA</div> <div>TEL: (301) 662-5019, FAX: (301) 662-1731</div> <div>WEB: WWW.QUANTICPMI.COM, EMAIL: SALES@QUANTICPMI.COM</div> <div>ISO 9001 CERTIFIED</div> |          |          |              |
|                                                                                                                                                        |  | DRAWN     |  | 10/2/2020 |  | TITLE                                                                                                                                                                                                                                                            |          |          |              |
|                                                                                                                                                        |  | SPH       |  |           |  | Outline                                                                                                                                                                                                                                                          |          |          |              |
|                                                                                                                                                        |  | REDRAWN   |  |           |  | PEC-42-1G40G-20-12-292FF-BT                                                                                                                                                                                                                                      |          |          |              |
|                                                                                                                                                        |  | ISSUED    |  |           |  | SIZE                                                                                                                                                                                                                                                             | FSCM NO. | DWG NO.  | REV.         |
|                                                                                                                                                        |  |           |  |           |  | B                                                                                                                                                                                                                                                                | 05XQ0    | 27039880 | A2           |
|                                                                                                                                                        |  |           |  |           |  | SCALE 2:1                                                                                                                                                                                                                                                        |          |          | SHEET 1 OF 2 |



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|                                                                                                                                                                                                                                     |                          |                            |                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|-------------------|
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| <b>TITLE</b><br>Outline<br>PEC-42-1G40G-20-12-292FF-BT                                                                                                                                                                              |                          |                            |                   |
| <b>SIZE</b><br>B                                                                                                                                                                                                                    | <b>FSCM NO.</b><br>05XQ0 | <b>DWG NO.</b><br>27039880 | <b>REV.</b><br>A2 |
| <b>SCALE</b> 2:1                                                                                                                                                                                                                    |                          | SHEET 2 OF 2               |                   |